

THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

SUB GRADE

PLUMBING

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

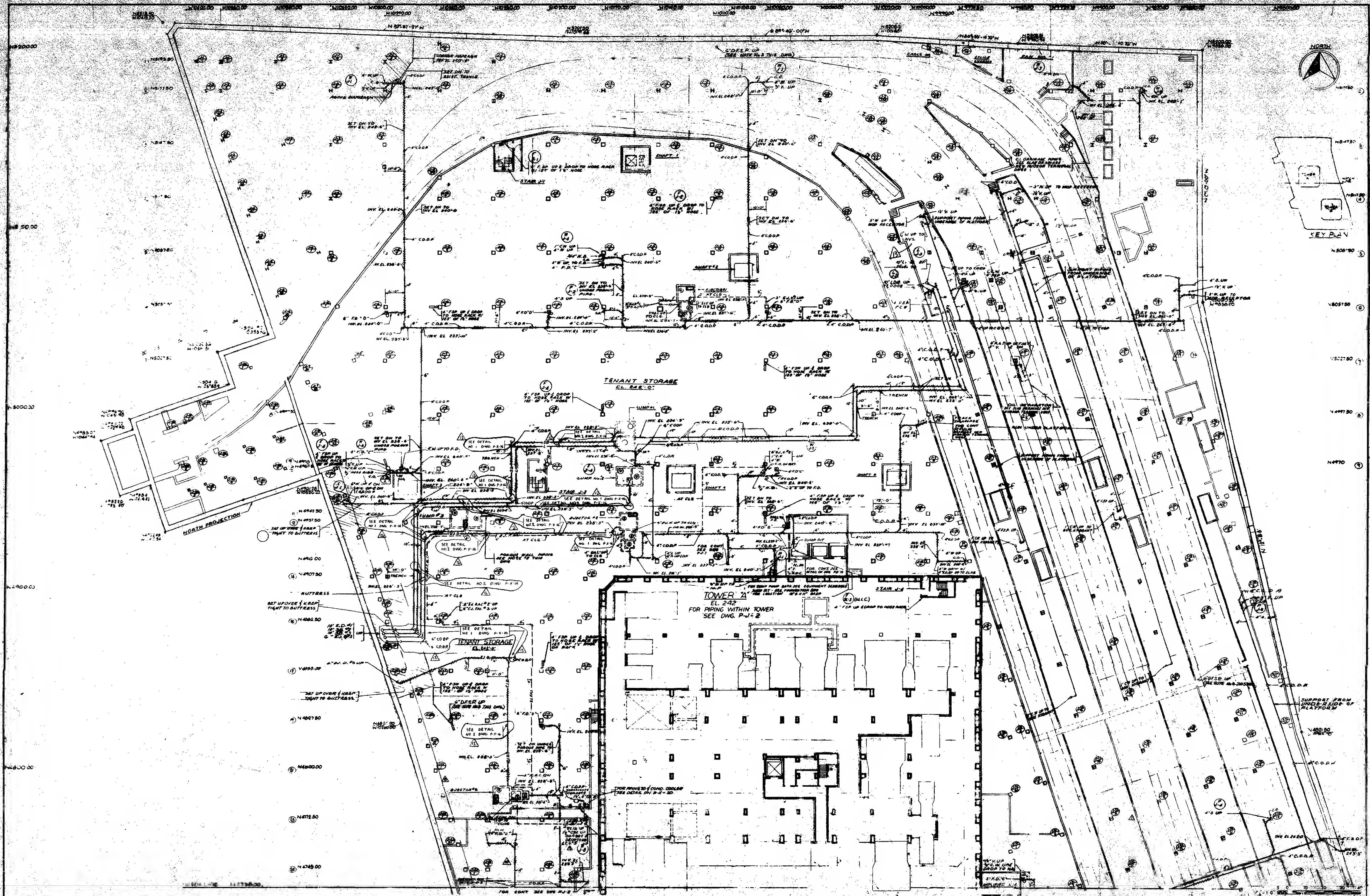
SKILLING HELLE CHRISTIANSEN & ROBERTSON
STRUCTURAL ENGINEERS
FORMERLY WORTHINGTON SKILLING HELLE & JACKSON

JAROS BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

SE 2 12/5/61
WB 3 12/5/61



NOTES

1. SEE DWG. P-J-1 FOR GENERAL NOTES & SYMBOLS.
2. SEE DWG. P-J-2 FOR GENERAL NOTES & SYMBOLS.
3. SEE DWG. P-J-3 FOR GENERAL NOTES & SYMBOLS.
4. SEE DWG. P-J-4 FOR GENERAL NOTES & SYMBOLS.
5. SEE DWG. P-J-5 FOR GENERAL NOTES & SYMBOLS.
6. SEE DWG. P-J-6 FOR GENERAL NOTES & SYMBOLS.
7. SEE DWG. P-J-7 FOR GENERAL NOTES & SYMBOLS.
8. SEE DWG. P-J-8 FOR GENERAL NOTES & SYMBOLS.
9. SEE DWG. P-J-9 FOR GENERAL NOTES & SYMBOLS.
10. SEE DWG. P-J-10 FOR GENERAL NOTES & SYMBOLS.
11. SEE DWG. P-J-11 FOR GENERAL NOTES & SYMBOLS.
12. SEE DWG. P-J-12 FOR GENERAL NOTES & SYMBOLS.
13. SEE DWG. P-J-13 FOR GENERAL NOTES & SYMBOLS.
14. SEE DWG. P-J-14 FOR GENERAL NOTES & SYMBOLS.
15. SEE DWG. P-J-15 FOR GENERAL NOTES & SYMBOLS.
16. SEE DWG. P-J-16 FOR GENERAL NOTES & SYMBOLS.
17. SEE DWG. P-J-17 FOR GENERAL NOTES & SYMBOLS.
18. SEE DWG. P-J-18 FOR GENERAL NOTES & SYMBOLS.
19. SEE DWG. P-J-19 FOR GENERAL NOTES & SYMBOLS.
20. SEE DWG. P-J-20 FOR GENERAL NOTES & SYMBOLS.

NO.	DATE	DESCRIPTION
1	10-22-70	1. 10-22-70 10-22-70
2	10-22-70	2. 10-22-70 10-22-70
3	10-22-70	3. 10-22-70 10-22-70
4	10-22-70	4. 10-22-70 10-22-70
5	10-22-70	5. 10-22-70 10-22-70
6	10-22-70	6. 10-22-70 10-22-70
7	10-22-70	7. 10-22-70 10-22-70
8	10-22-70	8. 10-22-70 10-22-70
9	10-22-70	9. 10-22-70 10-22-70
10	10-22-70	10. 10-22-70 10-22-70
11	10-22-70	11. 10-22-70 10-22-70
12	10-22-70	12. 10-22-70 10-22-70
13	10-22-70	13. 10-22-70 10-22-70
14	10-22-70	14. 10-22-70 10-22-70
15	10-22-70	15. 10-22-70 10-22-70
16	10-22-70	16. 10-22-70 10-22-70
17	10-22-70	17. 10-22-70 10-22-70
18	10-22-70	18. 10-22-70 10-22-70
19	10-22-70	19. 10-22-70 10-22-70
20	10-22-70	20. 10-22-70 10-22-70

THE WORLD TRADE CENTER
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MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

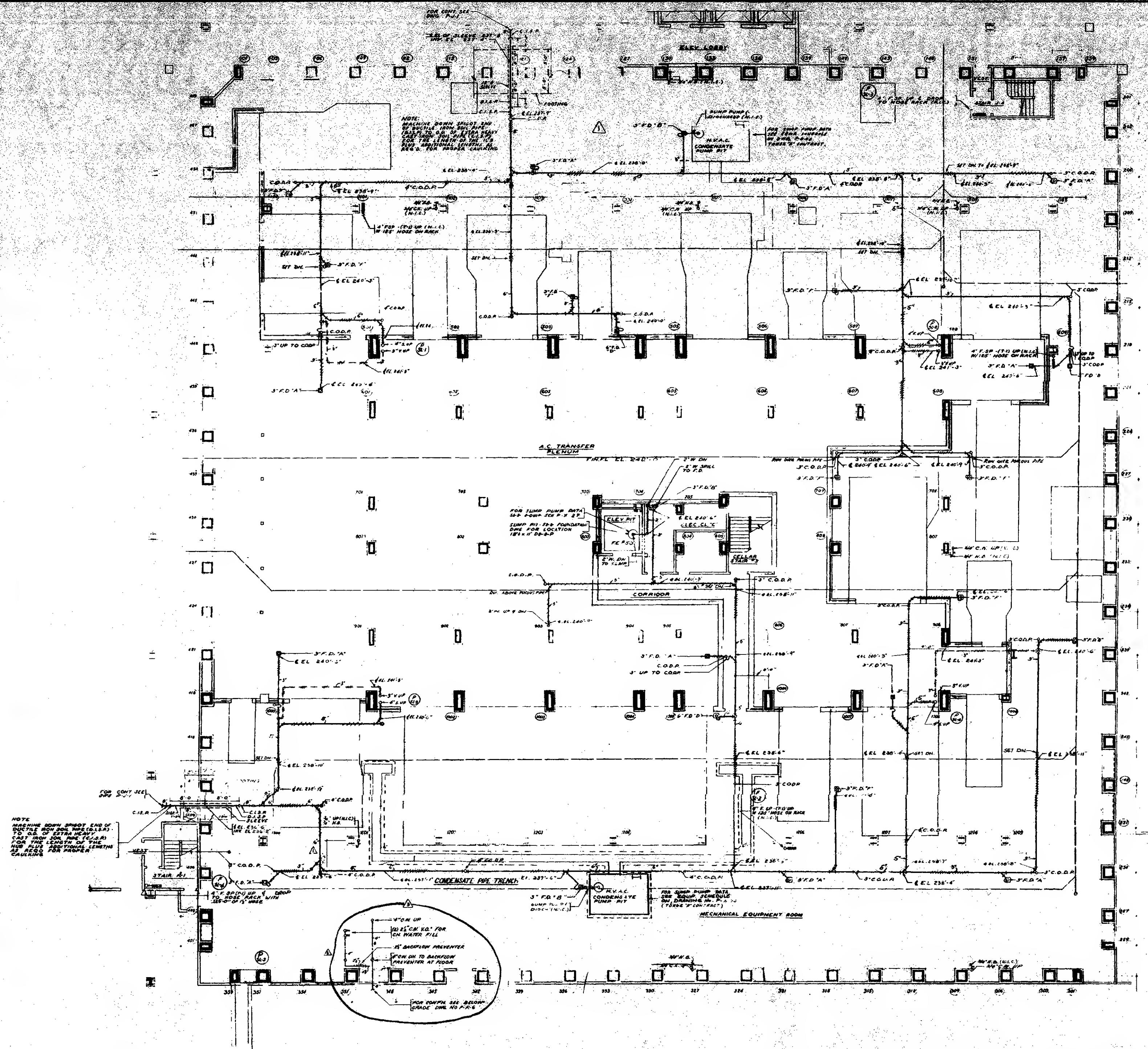
WORTHINGTON, BELLING, HELLER & JACKSON
STRUCTURAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

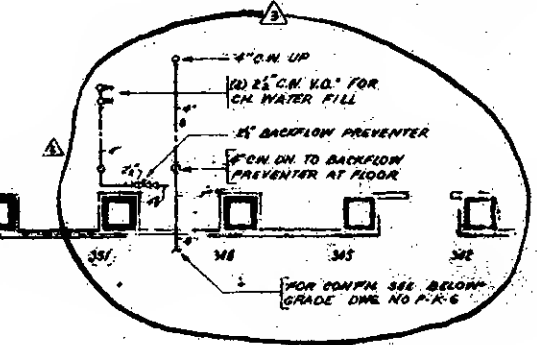
THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE J	
SUB-LEVEL 5-EL. 242	
DATE	BY
10-22-70	10-22-70
NO.	DESCRIPTION
1	1. 10-22-70 10-22-70
2	2. 10-22-70 10-22-70
3	3. 10-22-70 10-22-70
4	4. 10-22-70 10-22-70
5	5. 10-22-70 10-22-70
6	6. 10-22-70 10-22-70
7	7. 10-22-70 10-22-70
8	8. 10-22-70 10-22-70
9	9. 10-22-70 10-22-70
10	10. 10-22-70 10-22-70
11	11. 10-22-70 10-22-70
12	12. 10-22-70 10-22-70
13	13. 10-22-70 10-22-70
14	14. 10-22-70 10-22-70
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17	17. 10-22-70 10-22-70
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20	20. 10-22-70 10-22-70

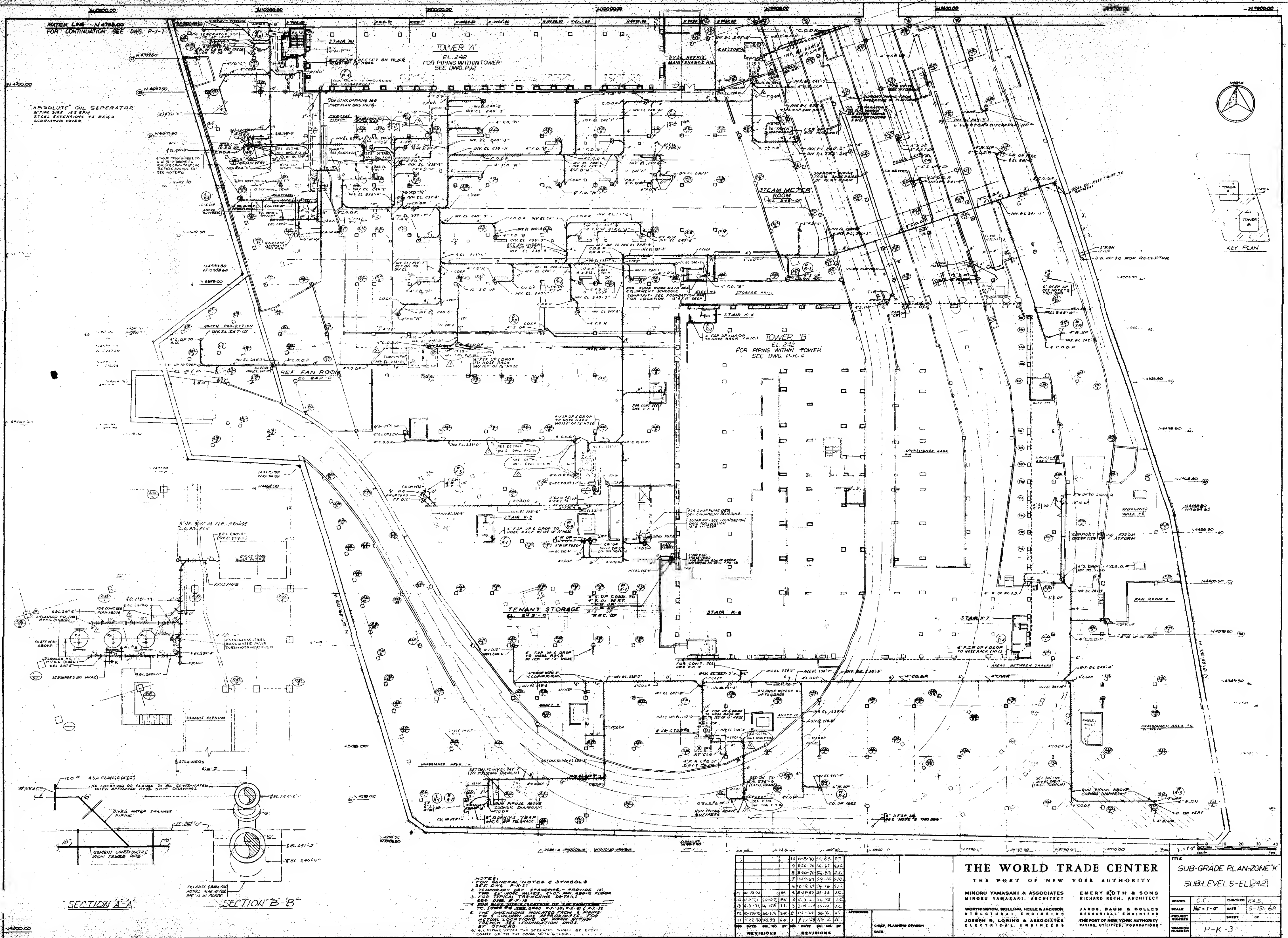


NOTES:
 1. SEE GENERAL NOTES AND SYMBOLS
 2. SEE DRAWING NO. P-1-1
 3. ALL FLOOR DRAINAGE AND WASTE, SOIL
 AND VENT PIPING INDICATED ON THIS
 DRAWING IS UNDER THE ELEV. 242 SLAB
 UNLESS OTHERWISE NOTED.
 4. THE PIPING WILL TERMINATE WITH
 A HUB CONNECTION DIRECTLY ABOVE
 THE "242" SLAB. ALL OTHER PIPING IS
 UNDER THE "242" SLAB.
 5. THE DIMENSIONS INDICATED FROM LINES TO
 CENTERLINE ARE FOR THE
 LOCATION OF PIPING WITHIN TRENCH SEE
 FOUNDATION DRAW. BY OTHER

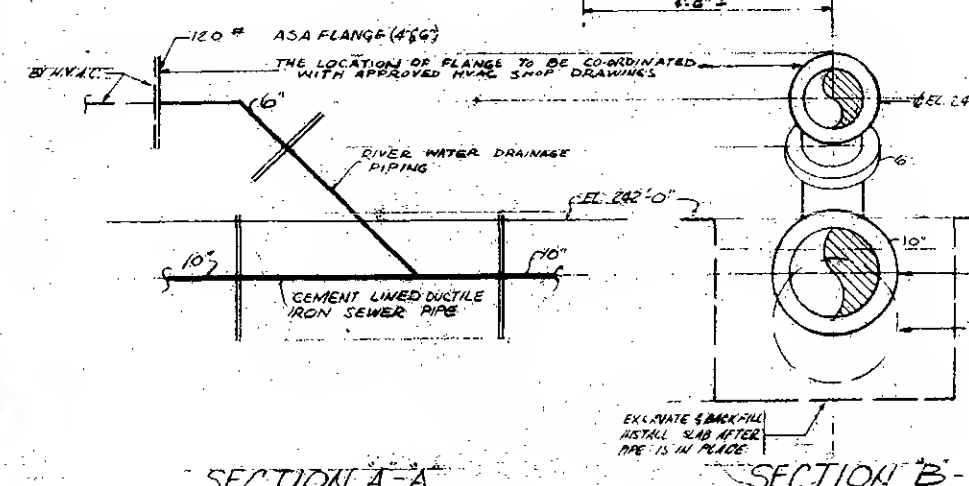
NOTE:
 HAVING DOWN SLOPE END OF
 DRAINAGE FROM ROOM (242) TO
 FOR THE LENGTH OF THE
 FOR THE LENGTH OF THE
 FOR THE LENGTH OF THE
 FOR THE LENGTH OF THE



CONTRACT NO. DRAWING NO.		THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY		SUB-GRADE PLAN ZONE J SUBLEVEL 5-EL 242 TOWER A	
MINORU YAMABANA & ASSOCIATES MINORU YAMABANA, ARCHITECT		EMERY ROTH & BOND RICHARD ROTH, ARCHITECT		F.A.S.	
WORTHINGTON, BULLING, MILLER, JACKSON 970 5TH AVE. 12TH FLOOR JOSEPH R. LORING & ASSOCIATES ELECTRICAL ENGINEERS		JAMES BAUER & SONS MECHANICAL ENGINEERS THE PORT OF NEW YORK AUTHORITY PAYING UTILITIES, FOUNDATIONS		DATE: 5-75 BY: [Signature] P-1-2	
REVISIONS		REVISIONS		REVISIONS	



ABSOLUTE OIL SEPARATOR
8" DIA. 18" H. 18" W.
STEEL EXTENSIONS AS REQ'D
SLOTTED COVER

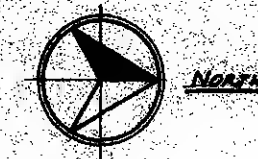


NOTES:
1. SEE GENERAL NOTES & SYMBOLS
2. TEMPORARY DAY STANDPIPE - PROVIDE (1)
3. FOR TYPICAL TRENCHING DETAIL
4. FOR TYPICAL TRENCHING DETAIL
5. FOR TYPICAL TRENCHING DETAIL
6. THE DIMENSIONS INDICATED FROM A PIPING
7. THE DIMENSIONS INDICATED FROM A PIPING
8. THE DIMENSIONS INDICATED FROM A PIPING
9. THE DIMENSIONS INDICATED FROM A PIPING
10. THE DIMENSIONS INDICATED FROM A PIPING

NO.	DATE	REV.	BY	NO.	DATE	REV.	BY
1	10-10-78	1	WY	1	10-10-78	1	WY
2	10-10-78	2	WY	2	10-10-78	2	WY
3	10-10-78	3	WY	3	10-10-78	3	WY
4	10-10-78	4	WY	4	10-10-78	4	WY
5	10-10-78	5	WY	5	10-10-78	5	WY
6	10-10-78	6	WY	6	10-10-78	6	WY
7	10-10-78	7	WY	7	10-10-78	7	WY
8	10-10-78	8	WY	8	10-10-78	8	WY
9	10-10-78	9	WY	9	10-10-78	9	WY
10	10-10-78	10	WY	10	10-10-78	10	WY

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RICHARD ROTH, ARCHITECT
JACOB BAUM & SONS
MECHANICAL ENGINEERS
JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAYING UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE K
SUB-LEVEL 5-EL 242
DRAWN: C.C. CHECKED: C.A.S.
SCALE: 1/8" = 1'-0" DATE: 5-15-68
SHEET: 1 OF 1
DRAWING NUMBER: P-K-3

[illegible]

THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

MIMORU YAMASAKI & ASSOCIATES MIMORU YAMASAKI, ARCHITECT	EMERY ROTH & SONS RICHARD ROTH, ARCHITECT
WORTHINGTON, SMILING, HELLER & JACKSON STRUCTURAL ENGINEERS 100 WEST 30TH ST. 3RD FLOOR NEW YORK 1, N.Y.	JAROS, BAUM & ROLLS MECHANICAL ENGINEERS 100 WEST 30TH ST. 3RD FLOOR NEW YORK 1, N.Y.
LEIGHTON, KIRK & ASSOCIATES ELECTRICAL ENGINEERS	PAVET, STULTZ & FOUNDATION PAVET, STULTZ & FOUNDATION

TITLE	
SUB-GRADE PLAN-ZONE 'K'	
SUB-LEVEL 5 - FL [242]	
TOWER 'B'	
DESIGN	G.C.
CHECKED	F.A.S.
SCALE	1/8" = 1'-0"
DATE	5-15-68
PROJECT NUMBER	SHEET 04
DATE OF REVISION	P-K-4



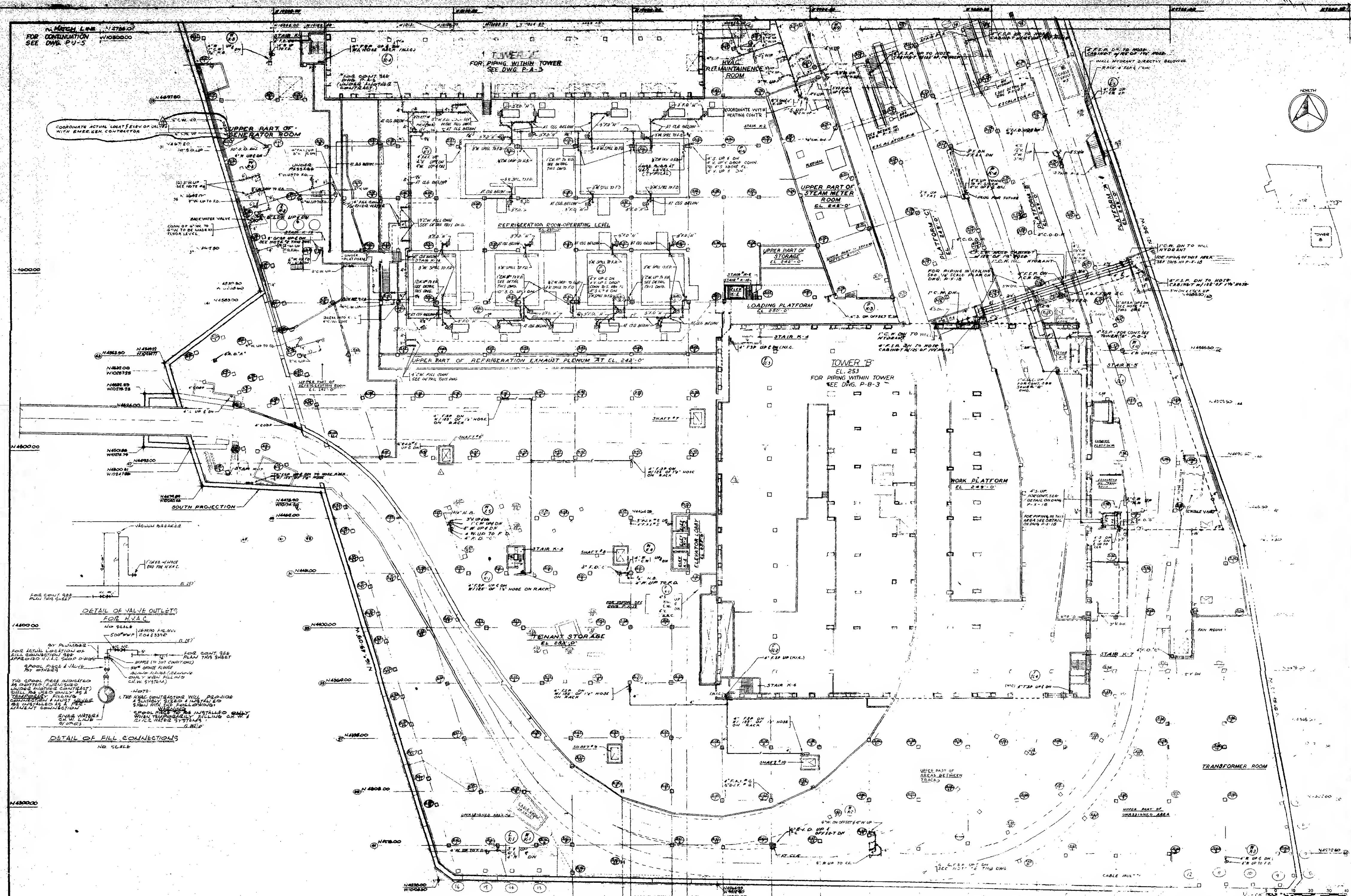
MATCH LINE N4755
FOR CONTINUATION SEE DWG P-K-6

- NOTE:
1. FOR GENERAL NOTES & SYMBOLS SEE DWG P-17
2. TEMPORARY & DRY STANDING - PROVIDE 1/2" DIA. HOLE 5'-0" MINIMUM ABOVE FLOOR.
3. FOR PIPING TO TOWERS ON PLATFORM SEE DETAIL SHEET DWG. NO. P-18
4. FOR ACTUAL LOCATION OF PIPING CHASES SEE ARCHITECTURAL DRAWINGS
5. INTERFERING PERM. ORIGNAL OF EXISTING PIPING TUBES.

NO.	DATE	REV.	BY	DATE	REV.	BY
1	10-10-60	1	RB	10-10-60	1	RB
2	10-10-60	2	RB	10-10-60	2	RB
3	10-10-60	3	RB	10-10-60	3	RB
4	10-10-60	4	RB	10-10-60	4	RB
5	10-10-60	5	RB	10-10-60	5	RB
6	10-10-60	6	RB	10-10-60	6	RB
7	10-10-60	7	RB	10-10-60	7	RB
8	10-10-60	8	RB	10-10-60	8	RB
9	10-10-60	9	RB	10-10-60	9	RB
10	10-10-60	10	RB	10-10-60	10	RB

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY
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RICHARD ROTH, ARCHITECT
WORTHINGTON, MILLING, NELLES & JACKSON
STRUCTURAL ENGINEERS
JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS
JACOB, BAUM & SOLLER
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PLANNING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE J
SUB-LEVEL 4-EL. 253
DRAWN: J.C. CHECKED: EAS.
SCALE: 1/8" = 1'-0" DATE: 5-15-60
SHEET: 1 OF 1
DRAWING NUMBER: P-J-5



NOTES:

- FOR GENERAL NOTES & SYMBOLS SEE DWG. P-1-1.
- TEMPORARY & DAY STANDARDS PROVIDE REVISIONS FOR REVISIONS. 5'-0" MIN.
- FOR PIPING TO TOILETS ON PLATFORM SEE DETAIL SHEET DWG. NO. P-K-10.
- FOR ACTUAL LOCATION OF R.C. CABINETS & BOX HYDRANTS ON PLATFORM SEE ARCHITECTURAL DRAWINGS.

5'-0" MIN. IN REVISIONS FROM ROOM AT 20'-0" MIN. REVISIONS OF TS P-1.

ALL PIPING TO BE INSTALLED IN ACCORDANCE WITH THE PORT OF NEW YORK AUTHORITY STANDARDS.

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MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

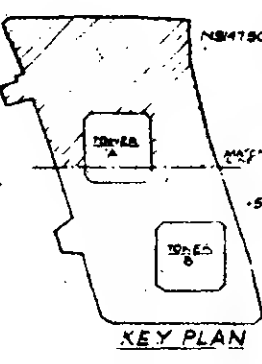
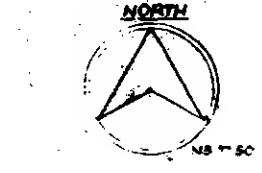
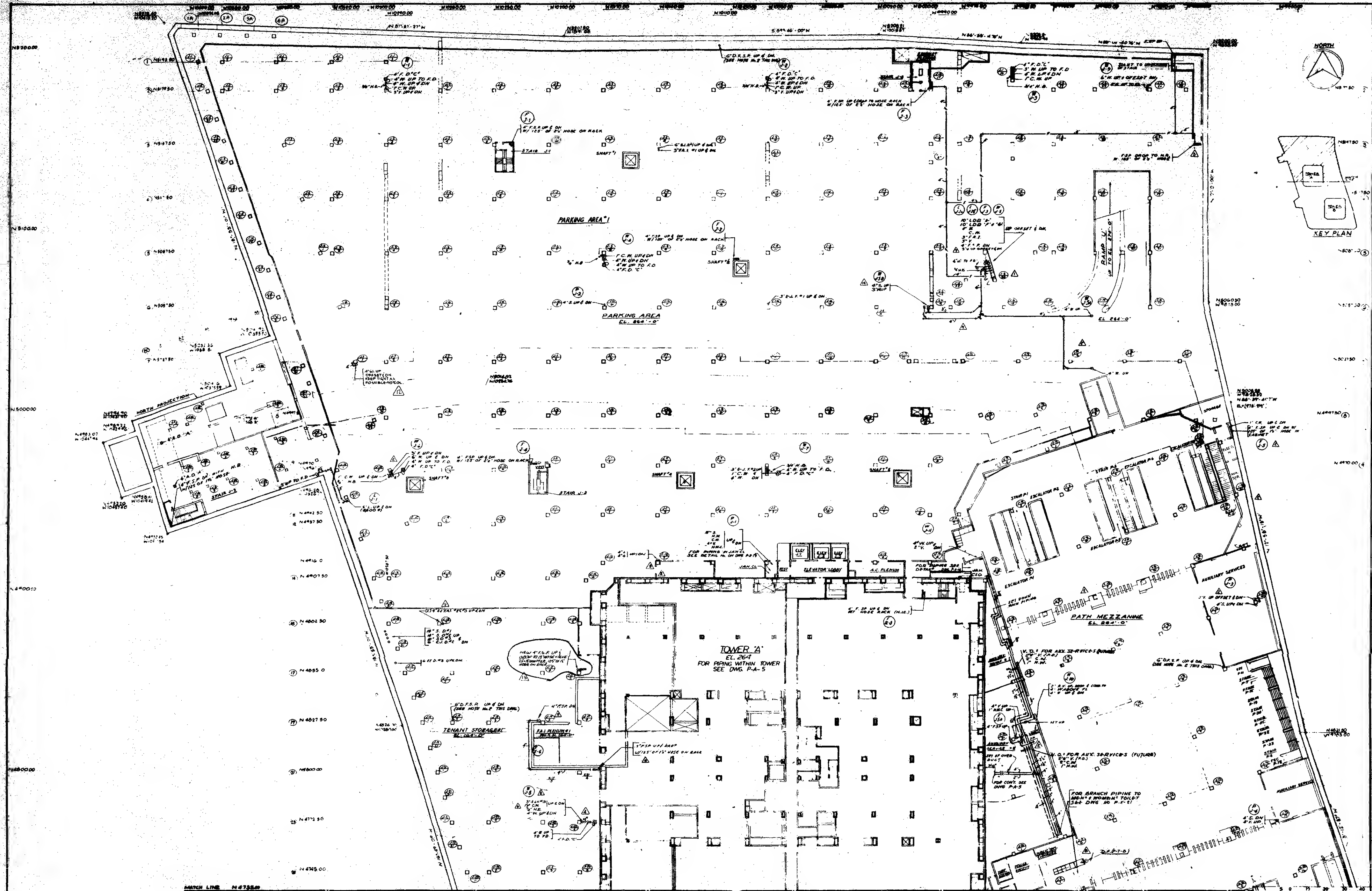
WORTHINGTON, SKILLING, HELLER, JACKSON
STRUCTURAL ENGINEERS
JOSEPH H. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE K
SUB-LEVEL 4-EL 250'-253'

NO.	DATE	BY	REVISIONS
1	10/1/77	J.C.	1
2	10/1/77	J.C.	2
3	10/1/77	J.C.	3
4	10/1/77	J.C.	4
5	10/1/77	J.C.	5
6	10/1/77	J.C.	6
7	10/1/77	J.C.	7
8	10/1/77	J.C.	8
9	10/1/77	J.C.	9
10	10/1/77	J.C.	10
11	10/1/77	J.C.	11
12	10/1/77	J.C.	12
13	10/1/77	J.C.	13
14	10/1/77	J.C.	14
15	10/1/77	J.C.	15
16	10/1/77	J.C.	16
17	10/1/77	J.C.	17
18	10/1/77	J.C.	18
19	10/1/77	J.C.	19
20	10/1/77	J.C.	20
21	10/1/77	J.C.	21
22	10/1/77	J.C.	22
23	10/1/77	J.C.	23
24	10/1/77	J.C.	24
25	10/1/77	J.C.	25
26	10/1/77	J.C.	26
27	10/1/77	J.C.	27
28	10/1/77	J.C.	28
29	10/1/77	J.C.	29
30	10/1/77	J.C.	30
31	10/1/77	J.C.	31
32	10/1/77	J.C.	32
33	10/1/77	J.C.	33
34	10/1/77	J.C.	34
35	10/1/77	J.C.	35
36	10/1/77	J.C.	36
37	10/1/77	J.C.	37
38	10/1/77	J.C.	38
39	10/1/77	J.C.	39
40	10/1/77	J.C.	40
41	10/1/77	J.C.	41
42	10/1/77	J.C.	42
43	10/1/77	J.C.	43
44	10/1/77	J.C.	44
45	10/1/77	J.C.	45
46	10/1/77	J.C.	46
47	10/1/77	J.C.	47
48	10/1/77	J.C.	48
49	10/1/77	J.C.	49
50	10/1/77	J.C.	50
51	10/1/77	J.C.	51
52	10/1/77	J.C.	52
53	10/1/77	J.C.	53
54	10/1/77	J.C.	54
55	10/1/77	J.C.	55
56	10/1/77	J.C.	56
57	10/1/77	J.C.	57
58	10/1/77	J.C.	58
59	10/1/77	J.C.	59
60	10/1/77	J.C.	60
61	10/1/77	J.C.	61
62	10/1/77	J.C.	62
63	10/1/77	J.C.	63
64	10/1/77	J.C.	64
65	10/1/77	J.C.	65
66	10/1/77	J.C.	66
67	10/1/77	J.C.	67
68	10/1/77	J.C.	68
69	10/1/77	J.C.	69
70	10/1/77	J.C.	70
71	10/1/77	J.C.	71
72	10/1/77	J.C.	72
73	10/1/77	J.C.	73
74	10/1/77	J.C.	74
75	10/1/77	J.C.	75
76	10/1/77	J.C.	76
77	10/1/77	J.C.	77
78	10/1/77	J.C.	78
79	10/1/77	J.C.	79
80	10/1/77	J.C.	80
81	10/1/77	J.C.	81
82	10/1/77	J.C.	82
83	10/1/77	J.C.	83
84	10/1/77	J.C.	84
85	10/1/77	J.C.	85
86	10/1/77	J.C.	86
87	10/1/77	J.C.	87
88	10/1/77	J.C.	88
89	10/1/77	J.C.	89
90	10/1/77	J.C.	90
91	10/1/77	J.C.	91
92	10/1/77	J.C.	92
93	10/1/77	J.C.	93
94	10/1/77	J.C.	94
95	10/1/77	J.C.	95
96	10/1/77	J.C.	96
97	10/1/77	J.C.	97
98	10/1/77	J.C.	98
99	10/1/77	J.C.	99
100	10/1/77	J.C.	100

APPROVED: J.C. CHIEF PLANNING DIVISION



MATCH LINE N-7350
FOR CONTINUATION SEE DWG. P-K-8

NOTE
FOR GENERAL NOTES & SYMBOLS
SEE C. DWG. P-1-1
E. TEMPORARY E. DRY STANDING PROVIDE
ROUND IN HOSE VALVES SLO. MINIMUM
GRADE FLOOR.

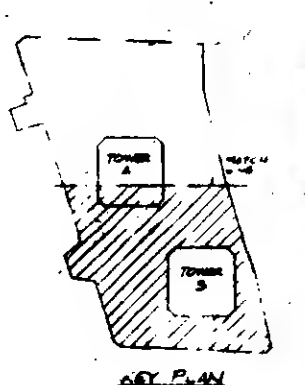
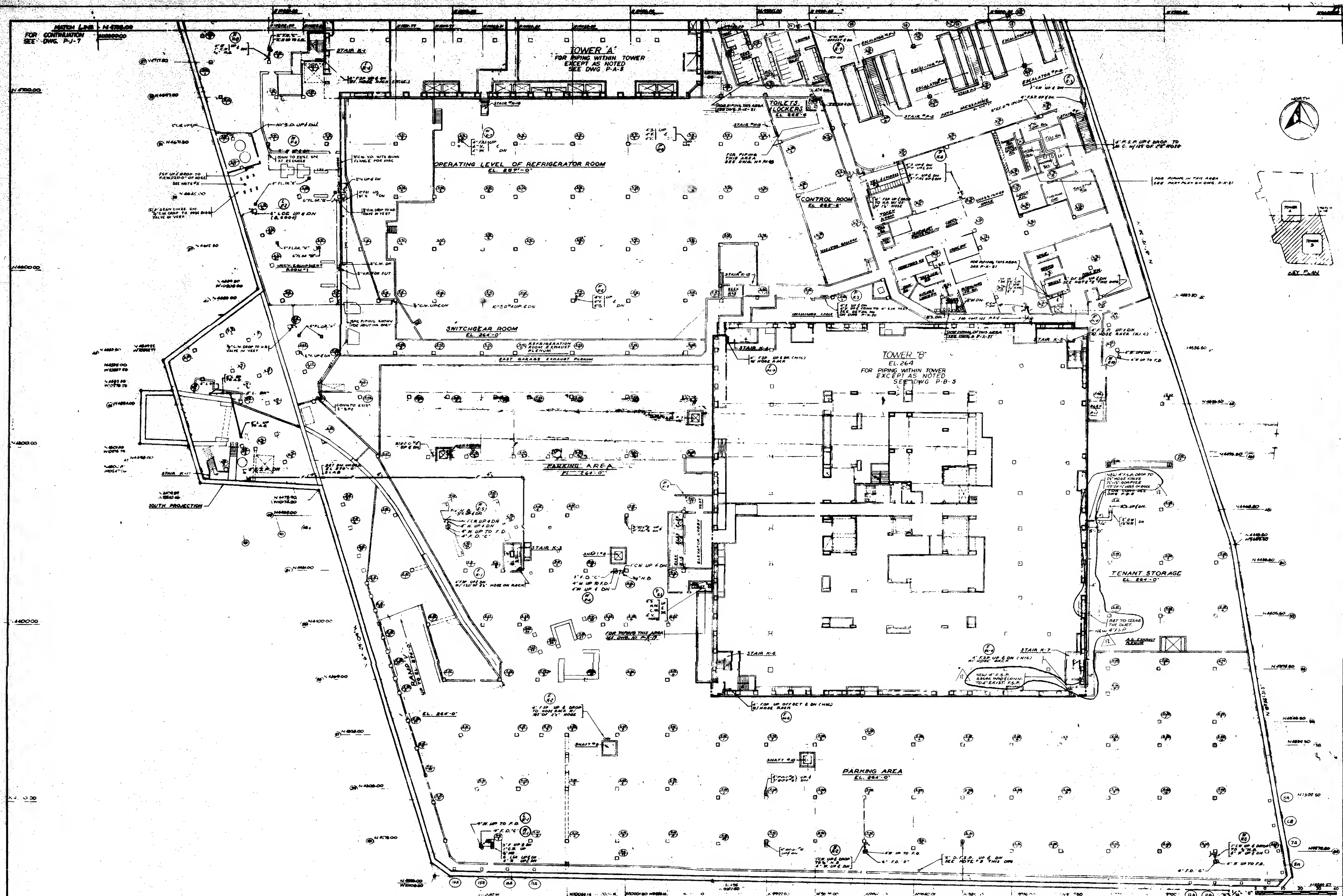
3. SUBSTITUTE FOR HOSE CABINETS AS
MANUFACTURED BY J. L. INDUSTRIES
MODEL "HEDBURY 502" WITH STAINLESS
STEEL FRONT IN PUBLIC AREAS AT
PATH PLATFORM AND MEZZANINE
LEVELS IN CASE OF SPECIFIED FIRE
HOSE CABINETS IN THESE AREAS

NO.	DATE	BY	REVISIONS
10	1-10-70	SG-33	SGC
9	3-10-70	SG-14	SGC
8	3-10-70	SG-16	SGC
7	12-19-69	SG-16	SGC
6	11-19-69	SG-16	SGC
5	5-2-69	SG-16	J.C.
4	3-20-69	SG-10	BT
3	12-28-68	SG-6	J.T.
2	7-1-68	SG-7	J.E.
1	11-15-67	SG-50	W.S.

APPROVED: _____
DATE: _____
CHECK, PLANNING DIVISION
DATE: _____

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WORTHINGTON, BULLING, HILL & JACKSON
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RICHARD ROTH, ARCHITECT
JANOS. BAUM & SONS
MECHANICAL ENGINEERS
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PAVING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE J
SUB-LEVEL 3-EL. 264
DRAWN: J.C. CHECKED: FAS.
SCALE: 1/8" = 1'-0" DATE: 5-15-68
PROJECT: OF
SHEET: 2-17



NOTES:
1. FOR GENERAL NOTES & SYMBOLS SEE DWG. P-K-1.
2. TO DIMENSIONALITY & DIMENSIONS - PROVIDE ON TWO (2) HOLES IN WALLS
3. DIMENSIONALITY & DIMENSIONS - PROVIDE ON TWO (2) HOLES IN WALLS
4. FOR PIPING TO TOILETS ON PLATFORM SEE DETAIL SHEET
5. PIPING FROM THE STAIRWELLS SHALL BE EPOXY COATED.

NO.	DATE	BY	CHKD.	APP'D.
1	10-2-71	SG-105	BY	
2	10-2-71	SG-105	BY	
3	10-2-71	SG-105	BY	
4	10-2-71	SG-105	BY	
5	10-2-71	SG-105	BY	
6	10-2-71	SG-105	BY	
7	10-2-71	SG-105	BY	
8	10-2-71	SG-105	BY	
9	10-2-71	SG-105	BY	
10	10-2-71	SG-105	BY	
11	10-2-71	SG-105	BY	
12	10-2-71	SG-105	BY	
13	10-2-71	SG-105	BY	
14	10-2-71	SG-105	BY	
15	10-2-71	SG-105	BY	
16	10-2-71	SG-105	BY	
17	10-2-71	SG-105	BY	
18	10-2-71	SG-105	BY	
19	10-2-71	SG-105	BY	
20	10-2-71	SG-105	BY	

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MINORU YAMASAKI & ASSOCIATES
ARCHITECT

SHERRY ROTH & SONS
MECHANICAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY

JAMES BAUM & SONS
MECHANICAL ENGINEERS

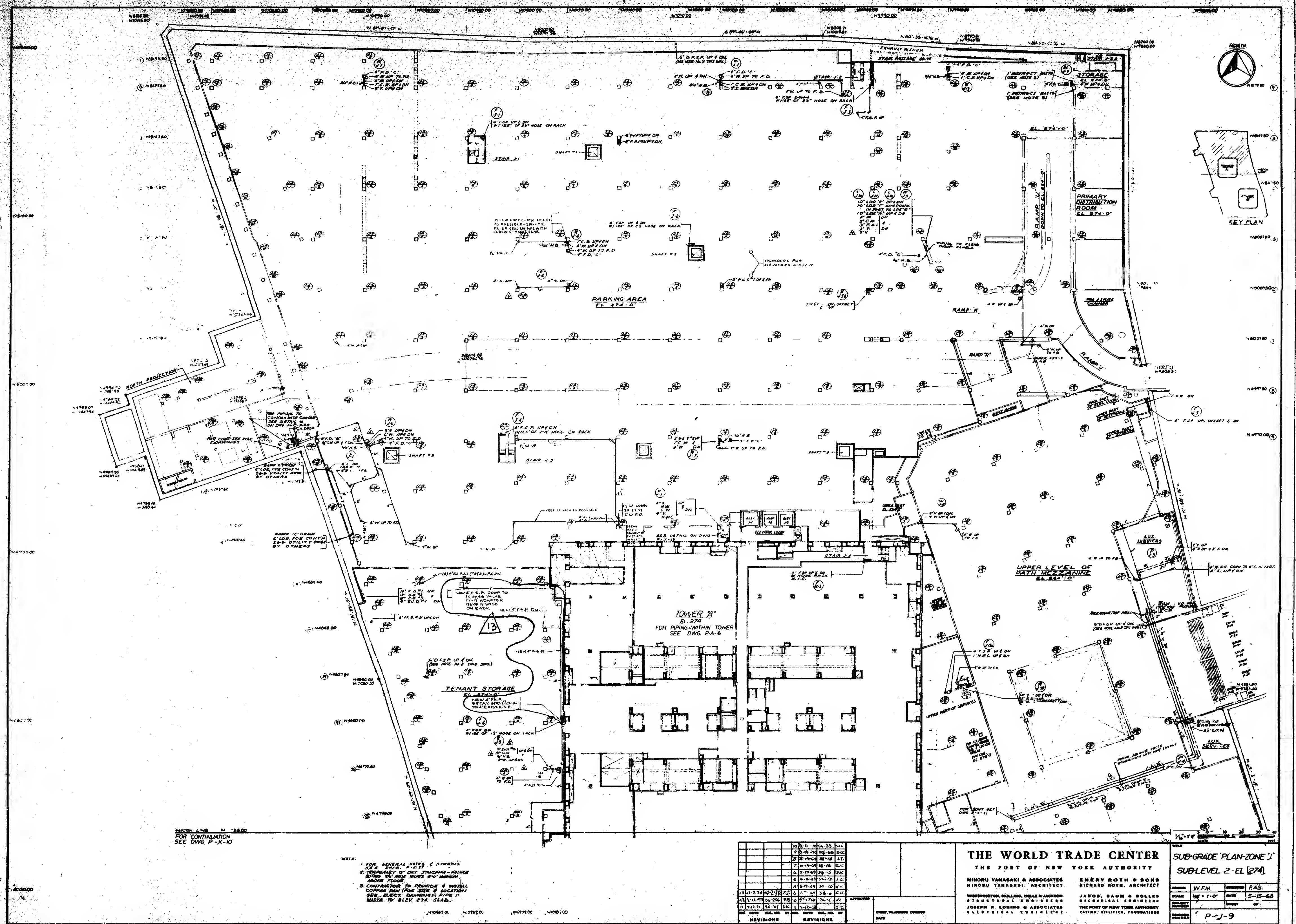
PATRICIA, UTILITIES, FOUNDATIONS

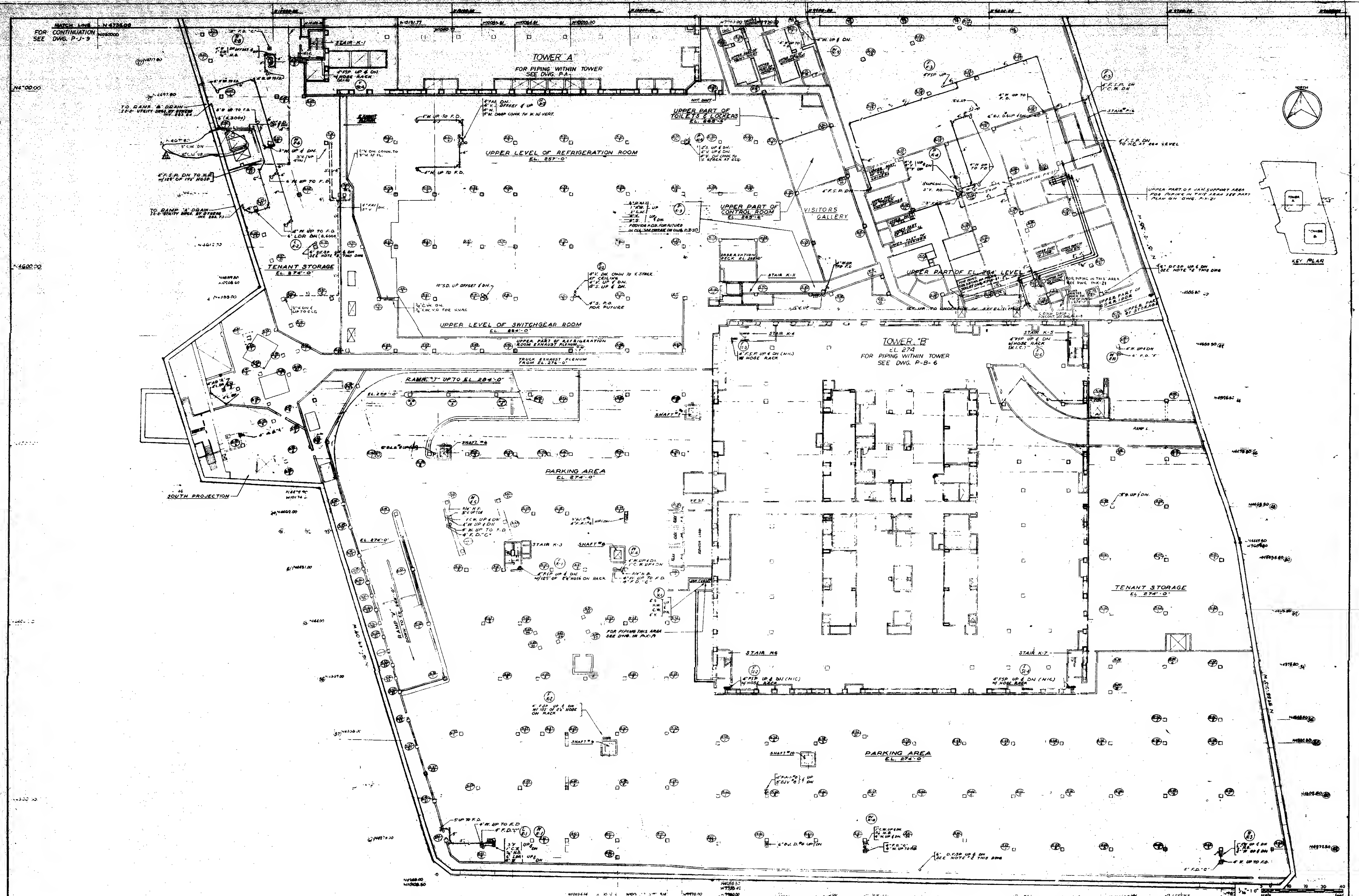
DATE: 5-15-68

BY: J.C.

APP'D: F.A.S.

REVISIONS: P-K-8





NOTES:
FOR GENERAL NOTES & SYMBOLS SEE DWG. P-X-27
E-B TEMPORARY DRY STAINPIS. PROVIDE (2) TWO E-B
ROSE VALVES. E-O MIN ABOVE FLOOR.

NO.	DATE	BUL. NO.	BY	NO.	DATE	BUL. NO.	BY
10	10-6-71	54-773		9	1-27-71	54-118	
8	7-22-70	56-39		7	3-17-70	54-51	
6	9-30-70	54-30		5	5-10-70	54-33	
4	12-19-69	54-76		3	3-19-69	54-10	
2	11-21-72	54-195	2 B	1	1-20-61	54-6	
11	12-31-71	56-145	2V	1	9-17-68	56-2	

NO. DATE BUL. NO. BY

REVISIONS

NO. DATE BUL. NO. BY

REVISIONS

APPROVED	CHIEF, PLANNING SYSTEMS DATE
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THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

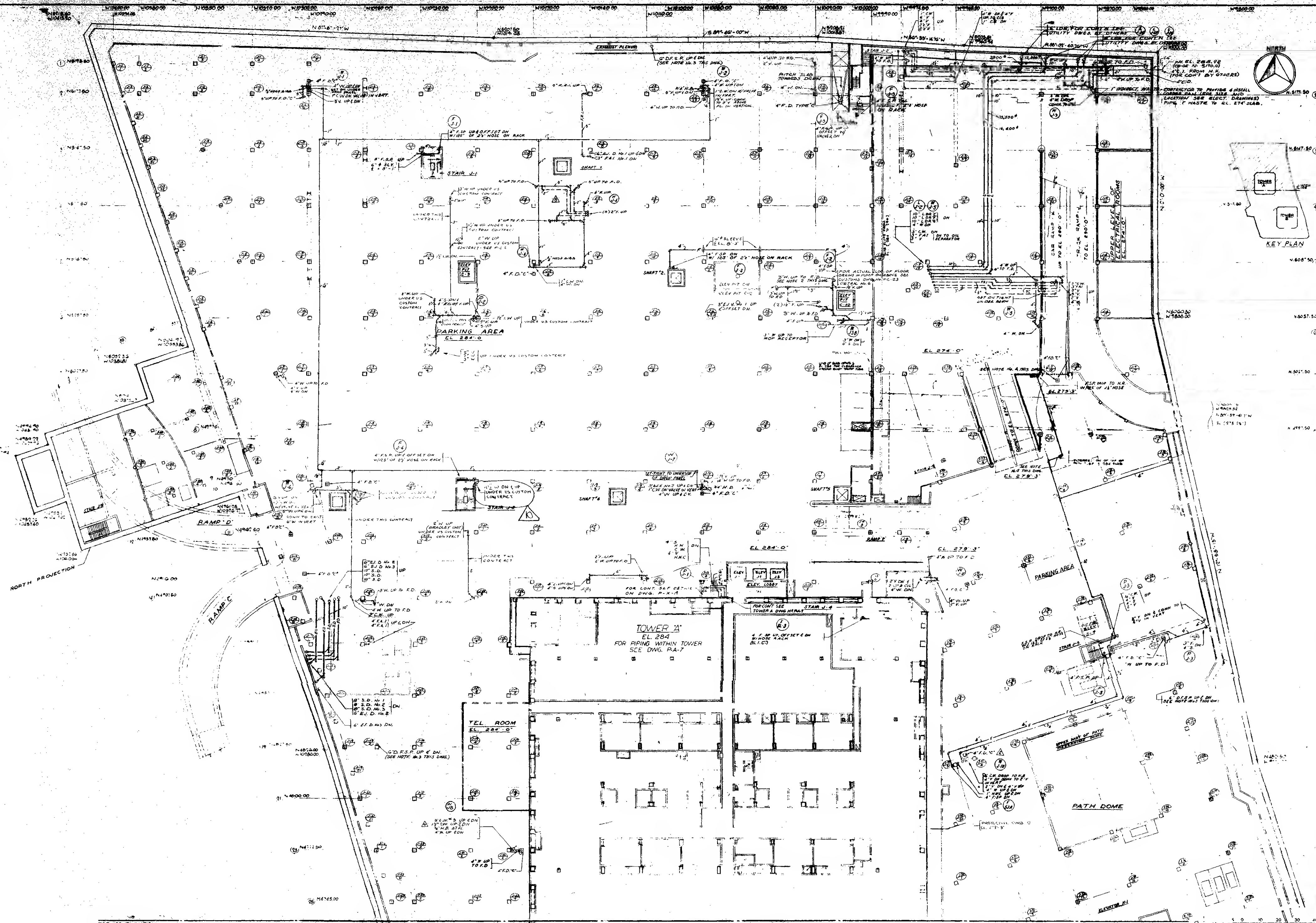
WORTHINGTON, SKELING, HELL & JACKSON
STRUCTURAL ENGINEERS

JOSEPH N. LOSIE & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT
JACOB, BAUN & SOLLIS
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVING, ERECTOR, FOUNDATIONS

SUB-GRADE PLAN-ZONE 'K'
SUBLEVEL 2-FL 274

ORIGIN	W.F.M.	CONTINENT	E.A.S.
ORIGIN	W.F.M.	DATE	5-15-68
PREPARED BY		REPORT	BY
RECEIVED NUMBER	P-K-10		



KEY PLAN

FOR CONTINUATION
SEE DWG. P-K-12

- NOTE:
- 1. FOR GENERAL NOTES & SYMBOLS SEE DWG. P-K-11
 - 2. THE LOCATIONS OF DEMONSTRATION TUBES SHALL BE P.O.S. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
 - 3. TEMPORARY C.D. STANDARDS - PROVIDE C.D. ON HOSE ALONG 5'0" MINIMUM ABOVE ROAD
 - 4. INSTALL PIPING AFTER REMOVAL OF EXISTING PATH TUBES

NO.	DATE	BY	NO.	DATE	BY
1	1-15-73	SG	1	1-15-73	SG
2	1-15-73	SG	2	1-15-73	SG
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THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

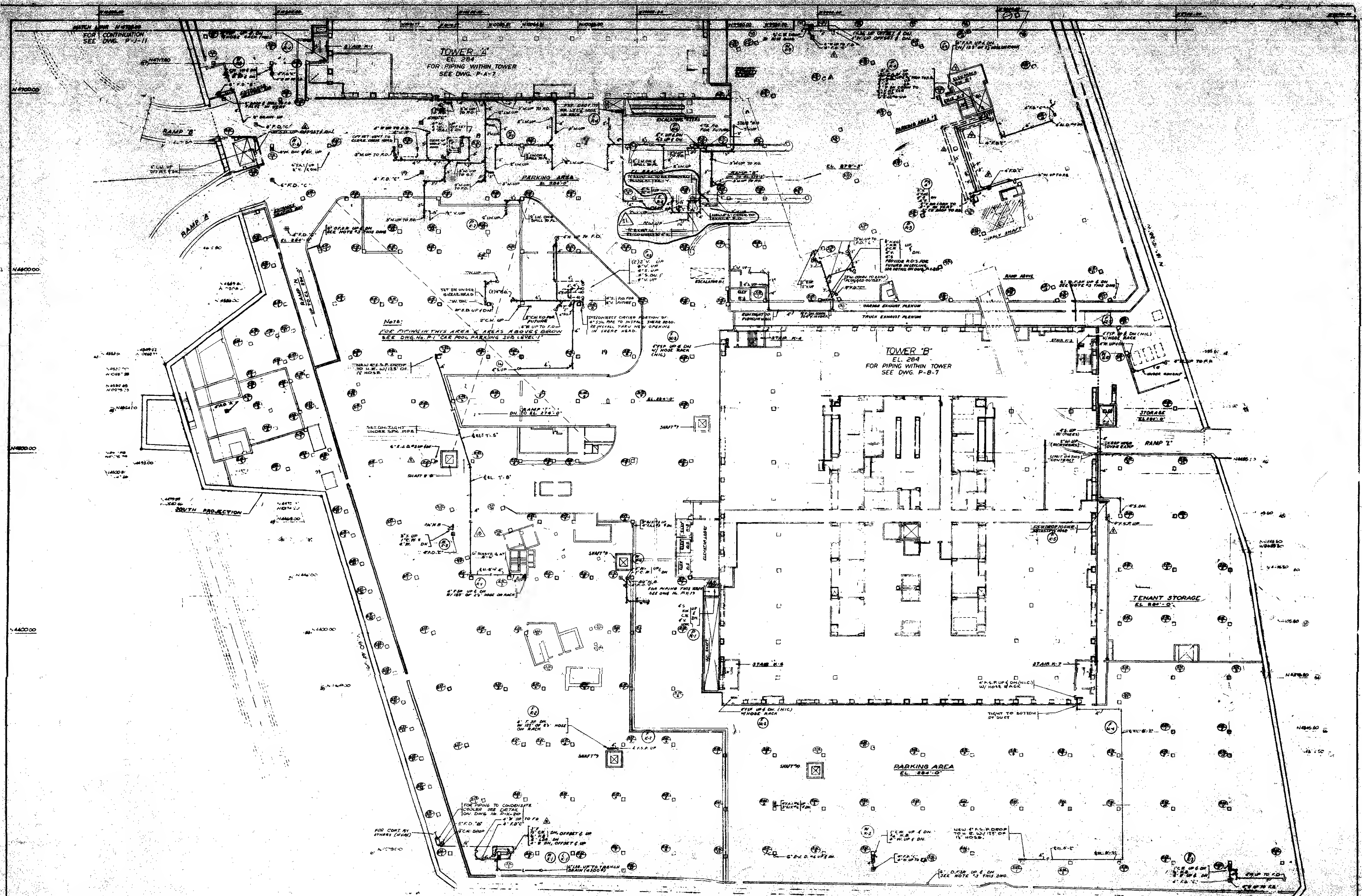
MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
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WORTHINGTON, BRILLING, HELLER & JACKSON
ST. RUSSELL, L. R. & S. R. ENGINEERS
JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVERS, UTILITIES, FOUNDATIONS

TITLE	SUB-GRADE PLAN-ZONE J
SUB-TITLE	SUB-LEVEL 1-EL. 279-284
DRAWN	J.E.
CHECKED	F.A.S.
SCALE	1/8" = 1'-0"
DATE	5-1-73
PROJECT NUMBER	
SHEET	OF
DRAWING NUMBER	P.J-11



NOTES:

1. FOR GENERAL NOTES & SYMBOLS SEE DWG P-X-27.
2. PIPING SHOWN DOUBLE LINED IS TENTATIVE CONTRACTOR SHALL NOT INSTALL UNTIL AUTHORIZED BY THE ENG. AUTHORITY.
3. TEMPORARY 6" DRY STANDPIPE PROVIDE (1) 2" DISC VALVES 5'-0" MIN. ABOVE FLOOR.

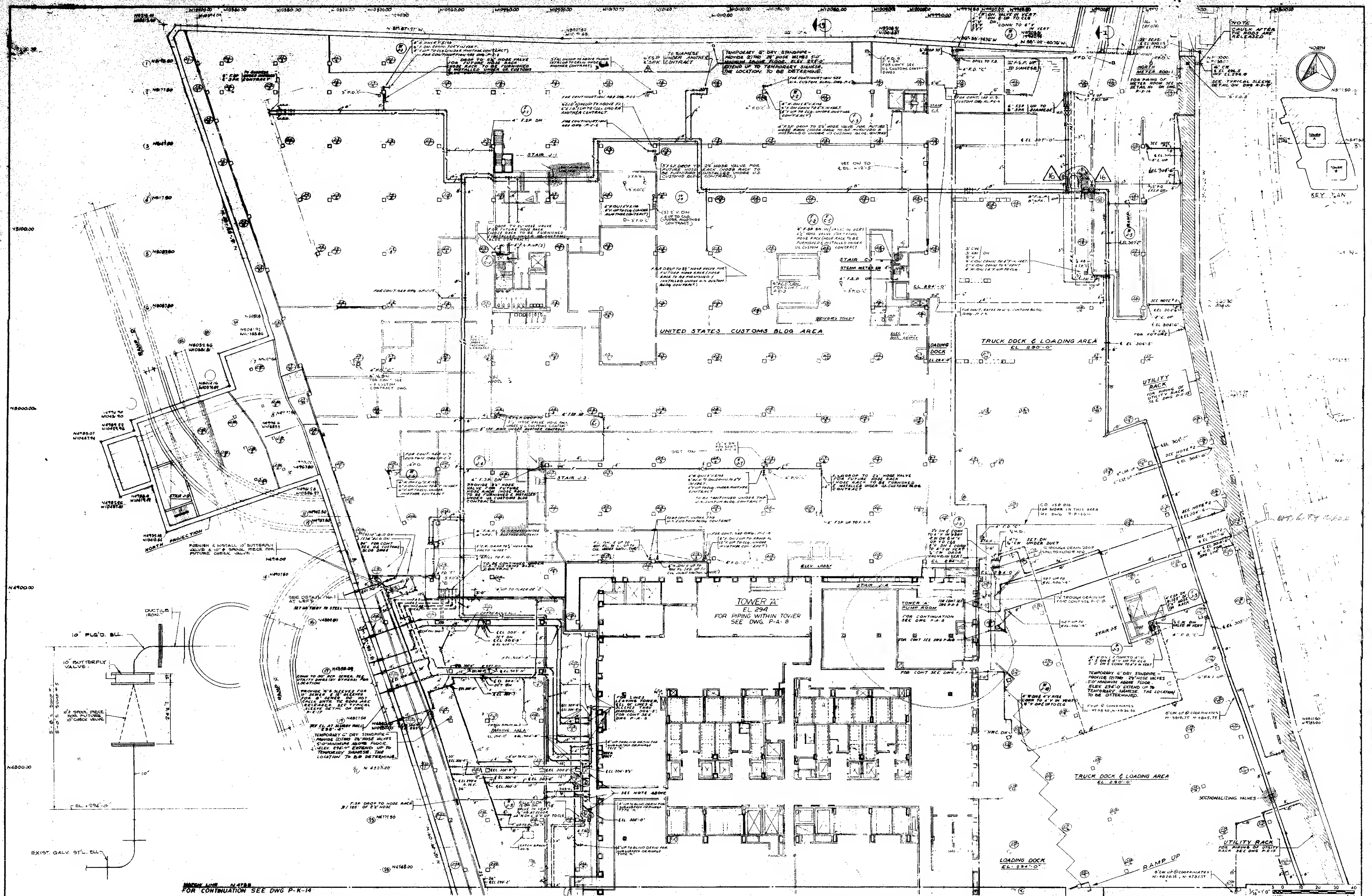
BULLETINS NOT NUMBERED ARE IN PROGRESS											
	26	11-11-74	10	100	5	2-77	14	100	7.5		
	27	7-10-72	5	223	510	9	7-22	70	59	540	
	28	6-2-70-22	10	105	1.5	6	7-20	70	56	51	7.1
	29	5-16-71	5	188	10	7	3-10	70	50	50	
	30	5-15-70	5	208	10	6	5-10	70	50	55	7.1
	31	5-9-70	5	207	10	5	7-23	80	56	56	50
	32	1-10-73	50	185	10	6	3-8	47	86	10	10
	33	10-6-71	50	70	1.5	7	8-2	80	50	50	50
	34	2-22-73	50	168	10	6	5-23	50	56	7	
	35	1-10-73	50	168	10	6	5-23	50	56	7	
	36	1-10-73	50	168	10	6	5-23	50	56	7	
	37	1-10-73	50	168	10	6	5-23	50	56	7	
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THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMARAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT	ENERY ROTN. & SONS RICHARD ROTN, ARCHITECT
WORTHINGTON, BRILLING, HILLS & JACKSON STRUCTURAL ENGINEERS	JAROS, SAUM & COLLIER MECHANICAL ENGINEERS
JOSEPH R. LORING & ASSOCIATES STRUCTURAL ENGINEERS	THE PORT OF NEW YORK AUTHORITY PAVING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN-ZONE 'K'

BRANCH	J.E.	CHARGE	FAS
DATE	10-10-68	DATE	5-15-68
REMARKS	11		



DETAIL No. 1
NO SCALE

SECTION LINE
FOR CONTINUATION SEE DWG P-K-14

- NOTES:
- FOR GENERAL NOTES AND SYMBOLS, SEE DRAWING NO. P-A-27.
 - FOR CONT. OF PIPING AT UTILITY RACK, SEE SCALE PLAN OF UTILITY RACK, DWG. P-A-10.
 - ALL LINES INDICATED GOING BY SMALL TERMINUS, THROUGH THE 30" DIA. 15' DEEP APPROXIMATE PITTINGS, FOR CONTINUATION UNDER EXISTING CONTRACT UNDER STAIRWELL.
 - FOR ACTUAL LOCATIONS OF ALL FLOOR DRAINS, SEE U.S. CUSTOM BLDG. CONTRACT DWG'S (P-C-1-3-4-5).
 - DEBRIDGE PIPING TO BE SCHED. 40 STANDARD STEEL.

5. THE 8" SPRINKLER MAIN INDICATED ON THIS PLAN, SEE DRAWING NO. P-A-27, CONTRACT DWG'S, SHALL BE AN INDICATION OF THE LINE, FROM WHICH MAIN CONNECTIONS, FOR THE COORDINATION SEE SPRINKLER DWG'S.

ALL BULL. NOT DATED ARE IN THE
PROCESS OF COMPLETION

NO.	DATE	BY	REVISIONS
1	12-27-73	W.M.	1
2	3-20-74	W.M.	2
3	12-28-74	W.M.	3
4	12-28-74	W.M.	4
5	12-28-74	W.M.	5
6	12-28-74	W.M.	6
7	12-28-74	W.M.	7
8	12-28-74	W.M.	8
9	12-28-74	W.M.	9
10	12-28-74	W.M.	10
11	12-28-74	W.M.	11
12	12-28-74	W.M.	12
13	12-28-74	W.M.	13
14	12-28-74	W.M.	14
15	12-28-74	W.M.	15
16	12-28-74	W.M.	16
17	12-28-74	W.M.	17
18	12-28-74	W.M.	18
19	12-28-74	W.M.	19
20	12-28-74	W.M.	20

NO.	DATE	BY	REVISIONS
1	12-27-73	W.M.	1
2	3-20-74	W.M.	2
3	12-28-74	W.M.	3
4	12-28-74	W.M.	4
5	12-28-74	W.M.	5
6	12-28-74	W.M.	6
7	12-28-74	W.M.	7
8	12-28-74	W.M.	8
9	12-28-74	W.M.	9
10	12-28-74	W.M.	10
11	12-28-74	W.M.	11
12	12-28-74	W.M.	12
13	12-28-74	W.M.	13
14	12-28-74	W.M.	14
15	12-28-74	W.M.	15
16	12-28-74	W.M.	16
17	12-28-74	W.M.	17
18	12-28-74	W.M.	18
19	12-28-74	W.M.	19
20	12-28-74	W.M.	20

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

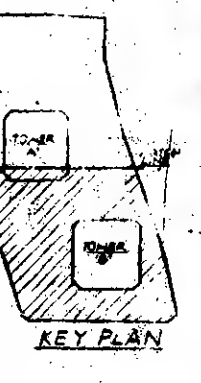
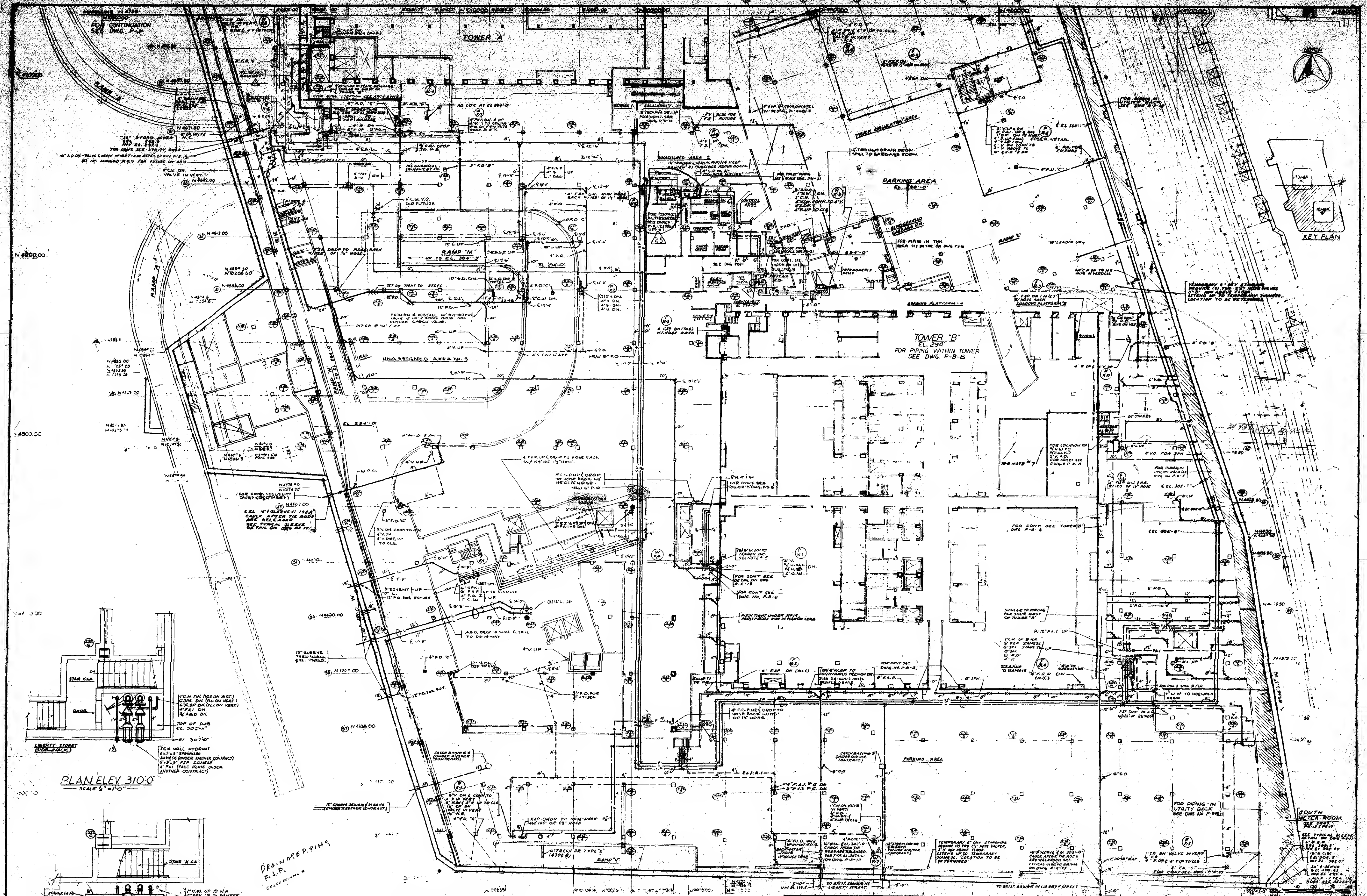
WORTHINGTON, BULLING, HELLES & JACKSON
WORTHINGTON, BULLING, HELLES & JACKSON
JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

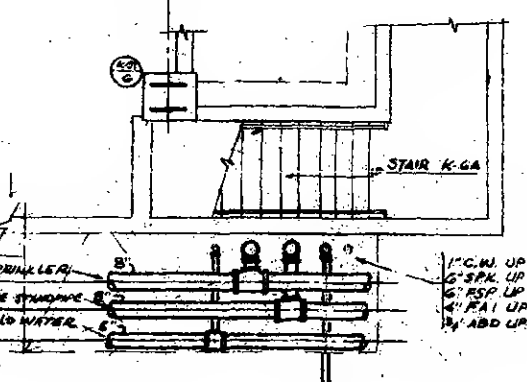
JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

SUB GRADE PLAN ZONE J
SUB-LEVEL - EL 290-294

DRAWN: P.J.T. CHECKED: F.A.S.
SCALE: 1/8" = 1'-0" DATE: 5-15-68
PROJECT NUMBER: SHEET OF
DRAWING NUMBER: P-J-13



PLAN ELEV 310'-0"
SCALE 1/8"=1'-0"



PLAN ELEV 294'-0"
SCALE 1/8"=1'-0"

PIPE AND PIPING
F.P.P.
GREEN COLUMNS

NOTE:
1. FOR GENERAL NOTES & SYMBOLS
2. FOR CONT. OF PIPING AT UTILITY RACK, SEE DWG. P-K-15
3. SEE SCALE PLAN OF UTILITY RACK, DWG. P-K-15

4. THE 1" SPRINKLER MAIN INDICATED ON THIS PLAN
WILL BE INSTALLED UNDER CONTRACT AND
IS SHOWN SOLELY AS AN INDICATOR FOR THE
PIPE CONTRACTOR TO LOCATE THE MAIN WITH
THEIR OWN SURVEYING DATA. FOR FURTHER COORDINATION SEE SPRINKLER DWG.

5. DRINKING PIPING TO BE SCHED. 40
GALVANIZED STEEL

NO.	DATE	BY	CHKD.	REVISIONS
1	10-18-72	SS	SS	1. 10-18-72
2	11-13-72	SS	SS	2. 11-13-72
3	11-13-72	SS	SS	3. 11-13-72
4	11-13-72	SS	SS	4. 11-13-72
5	11-13-72	SS	SS	5. 11-13-72
6	11-13-72	SS	SS	6. 11-13-72
7	11-13-72	SS	SS	7. 11-13-72
8	11-13-72	SS	SS	8. 11-13-72
9	11-13-72	SS	SS	9. 11-13-72
10	11-13-72	SS	SS	10. 11-13-72
11	11-13-72	SS	SS	11. 11-13-72
12	11-13-72	SS	SS	12. 11-13-72
13	11-13-72	SS	SS	13. 11-13-72
14	11-13-72	SS	SS	14. 11-13-72
15	11-13-72	SS	SS	15. 11-13-72
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17	11-13-72	SS	SS	17. 11-13-72
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19	11-13-72	SS	SS	19. 11-13-72
20	11-13-72	SS	SS	20. 11-13-72
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22	11-13-72	SS	SS	22. 11-13-72
23	11-13-72	SS	SS	23. 11-13-72
24	11-13-72	SS	SS	24. 11-13-72
25	11-13-72	SS	SS	25. 11-13-72
26	11-13-72	SS	SS	26. 11-13-72
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67	11-13-72	SS	SS	67. 11-13-72
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69	11-13-72	SS	SS	69. 11-13-72
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71	11-13-72	SS	SS	71. 11-13-72
72	11-13-72	SS	SS	72. 11-13-72
73	11-13-72	SS	SS	73. 11-13-72
74	11-13-72	SS	SS	74. 11-13-72
75	11-13-72	SS	SS	75. 11-13-72
76	11-13-72	SS	SS	76. 11-13-72
77	11-13-72	SS	SS	77. 11-13-72
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79	11-13-72	SS	SS	79. 11-13-72
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98	11-13-72	SS	SS	98. 11-13-72
99	11-13-72	SS	SS	99. 11-13-72
100	11-13-72	SS	SS	100. 11-13-72

THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

WORTHINGTON, SKILLING, HILL & JACKSON
JOSEPH S. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

SMERY, ROTH & SONS
RICHARD ROTH, ARCHITECT

JAROS, BAUM & SONS
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
DIVISION OF ENGINEERING

SUB-GRADE PLAN-ZONE K

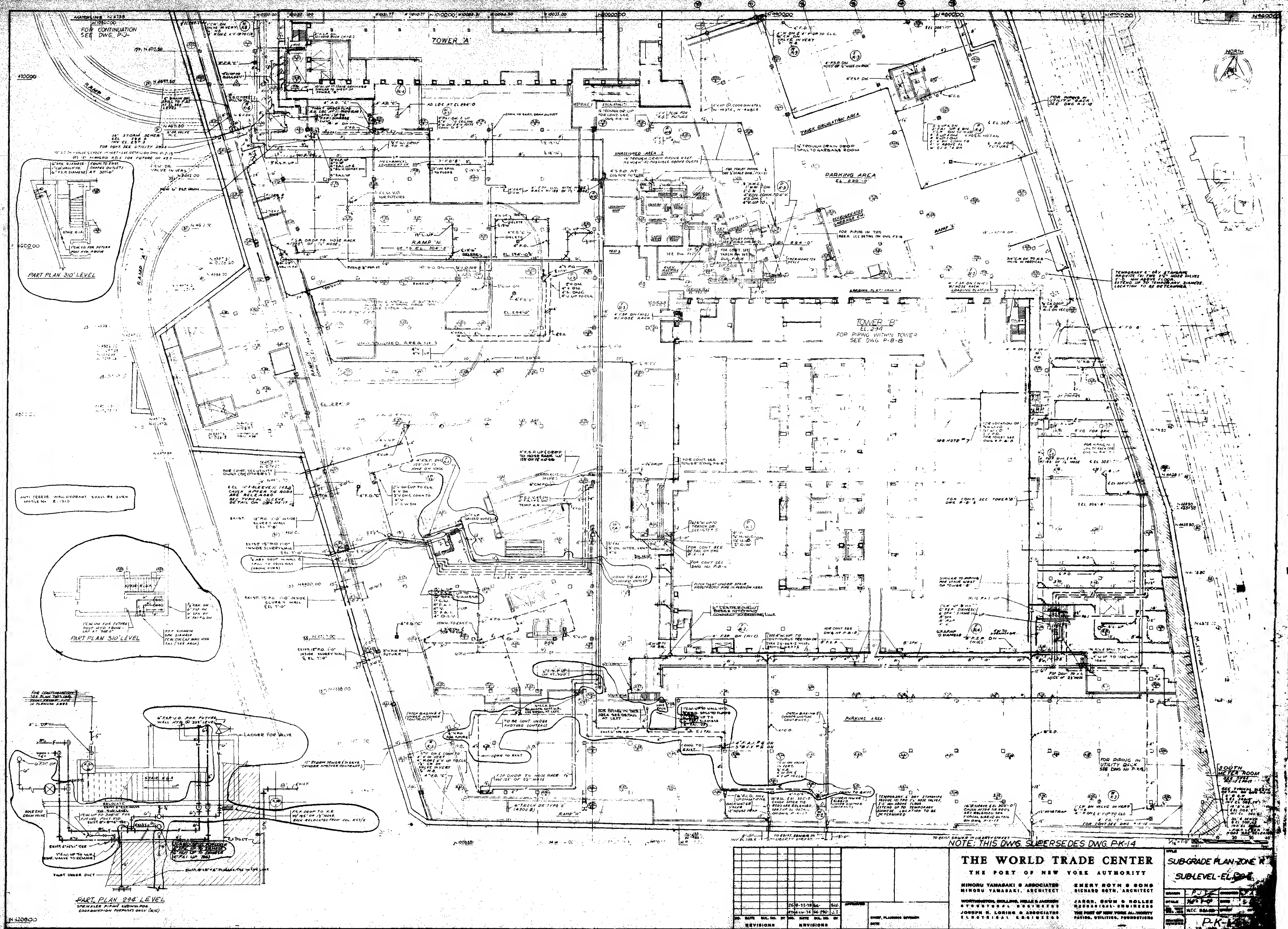
SUB-LEVEL EL. 294'

DATE: 11-13-72

BY: SS

CHKD: SS

REVISIONS: 1



THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

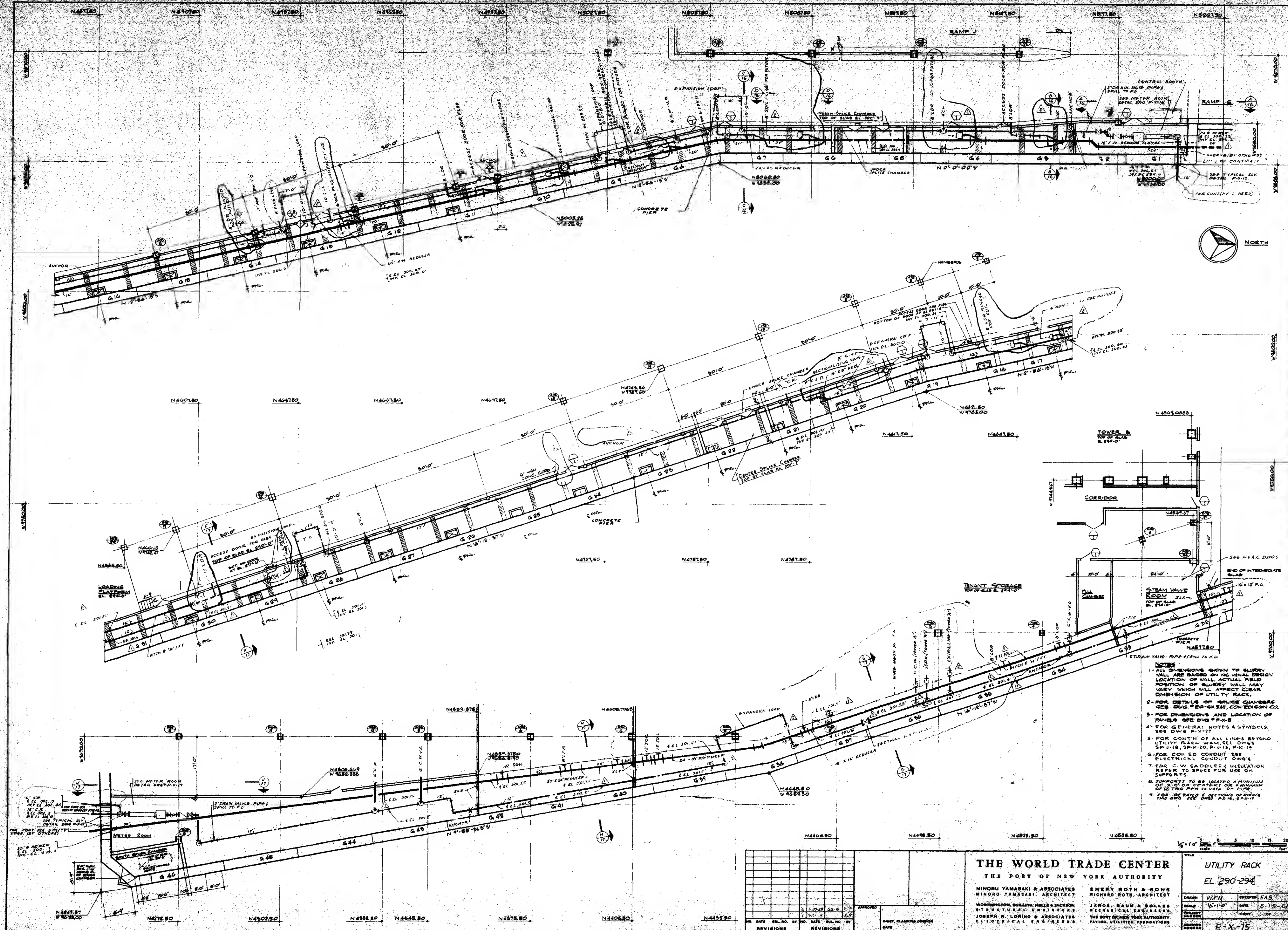
MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT
JOURN. H. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROY & SONS
RICHARD ROY, ARCHITECT
JACOB, BRUN & KOLLES
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

SUB-GRADE PLAN - ZONE A
SUBLEVEL - EL. 294

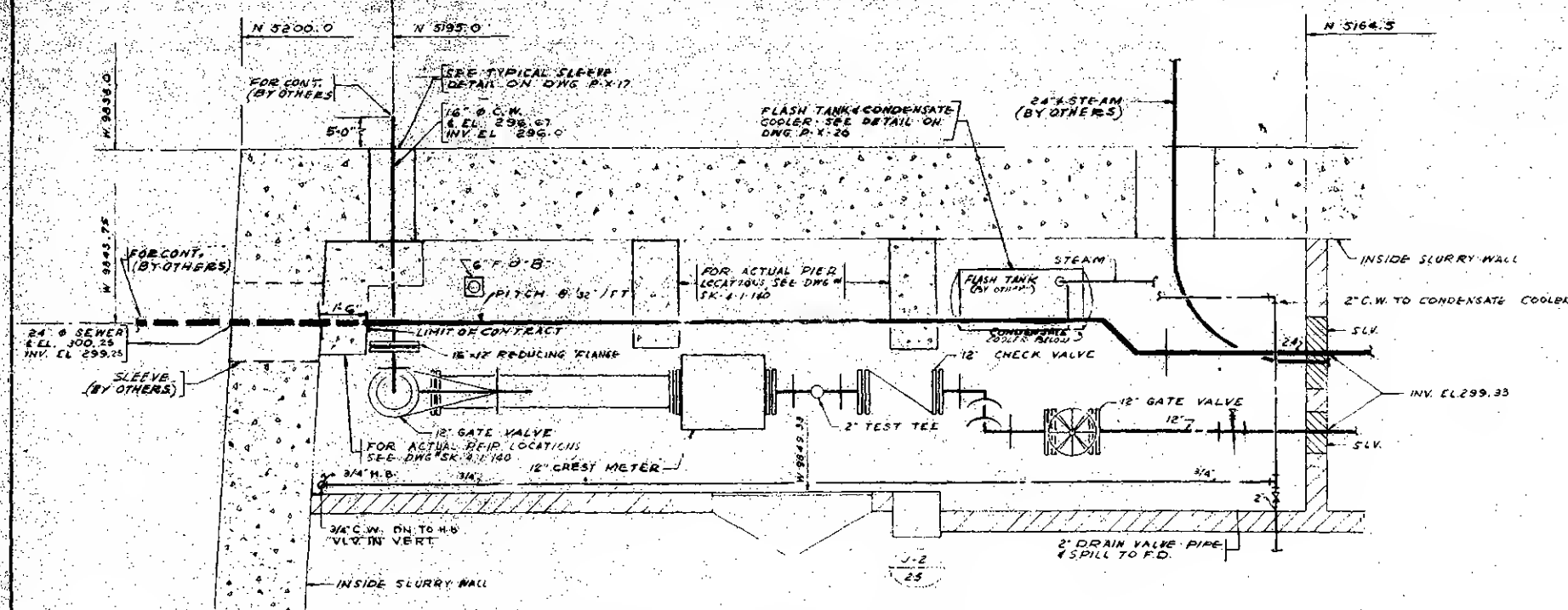
DATE	10-11-78	BY	SL
REVISION	10-11-78	BY	SL
REVISION	10-11-78	BY	SL

NOTE: THIS DWG. SUPERSEDES DWG. PK-14

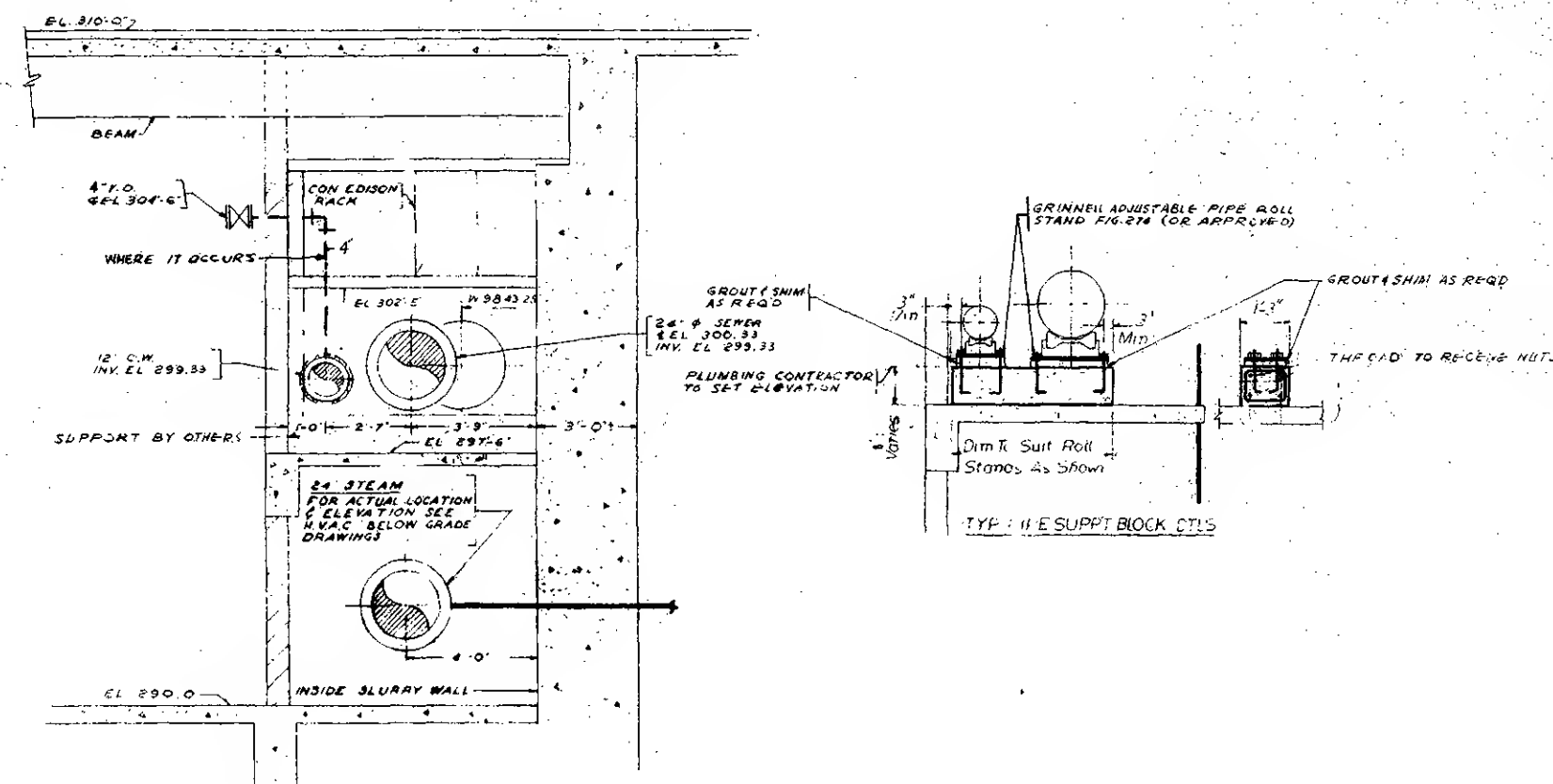


- NOTES
- 1. ALL DIMENSIONS SHOWN TO SLURRY WALL ARE BASED ON NOMINAL DESIGN LOCATION OF WALL. ACTUAL FIELD POSITION OF SLURRY WALL MAY VARY WHICH WILL AFFECT CLEAR DIMENSION OF UTILITY RACK.
 - 2. FOR DETAILS OF SPICE CHAMBERS SEE DWG. # E-0-GK-SH, CON EDISON CO.
 - 3. FOR DIMENSIONS AND LOCATION OF PANELS SEE DWG. # P-0-C.
 - 4. FOR GENERAL NOTES & SYMBOLS SEE DWG. P-V-27.
 - 5. FOR CONTN. OF ALL LINES BEYOND UTILITY RACK, WALL, SEE DWG. SP-J-18, SP-K-20, P-J-13, P-K-14.
 - 6. FOR COILED CONDUIT SEE ELECTRICAL CONDUIT DWG'S.
 - 7. FOR C.W. CADDIES & INSULATION REFER TO SPECS FOR USE ON SUPPORTS.
 - 8. SUPPORTS TO BE LOCATED A MINIMUM OF 6" ON CENTERLINE OR MINIMUM OF 12" FROM END OF RACK.
 - 9. FOR DETAILS & SECTIONS OF RACKS THIS DWG. SEE DWG. P-K-16, P-K-17.

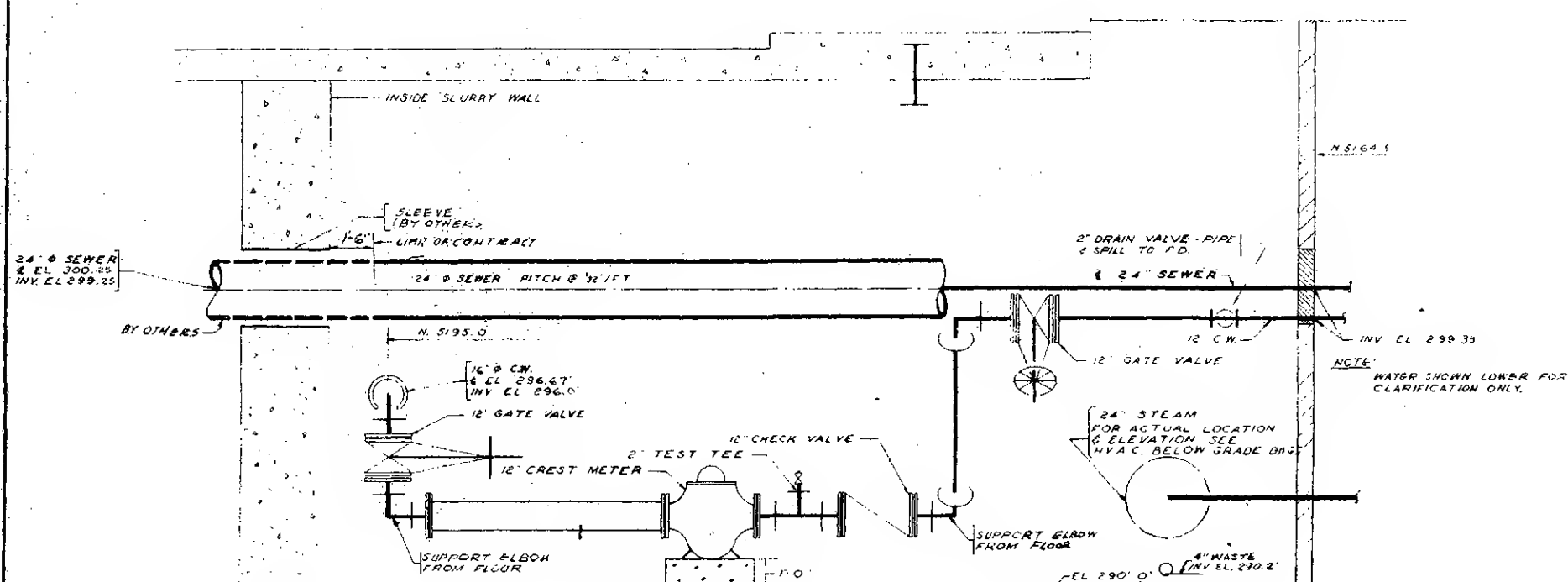
THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY				UTILITY RACK EL. 290'-294'	
MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT				EMERY ROTH & SONS RICHARD ROTH, ARCHITECT	
WORKINGTON, BULLING, HILL & JACKSON STRUCTURAL ENGINEERS				JAMES BAUM & ROLLES MECHANICAL ENGINEERS	
JOSEPH R. LORINO & ASSOCIATES ELECTRICAL ENGINEERS				THE PORT OF NEW YORK AUTHORITY PAVING, UTILITIES, FOUNDATIONS	
DATE: 5-10-67 BY: [Signature] REVISIONS:		DATE: 5-10-67 BY: [Signature] REVISIONS:		APPROVED: [Signature] DATE: 5-15-68	



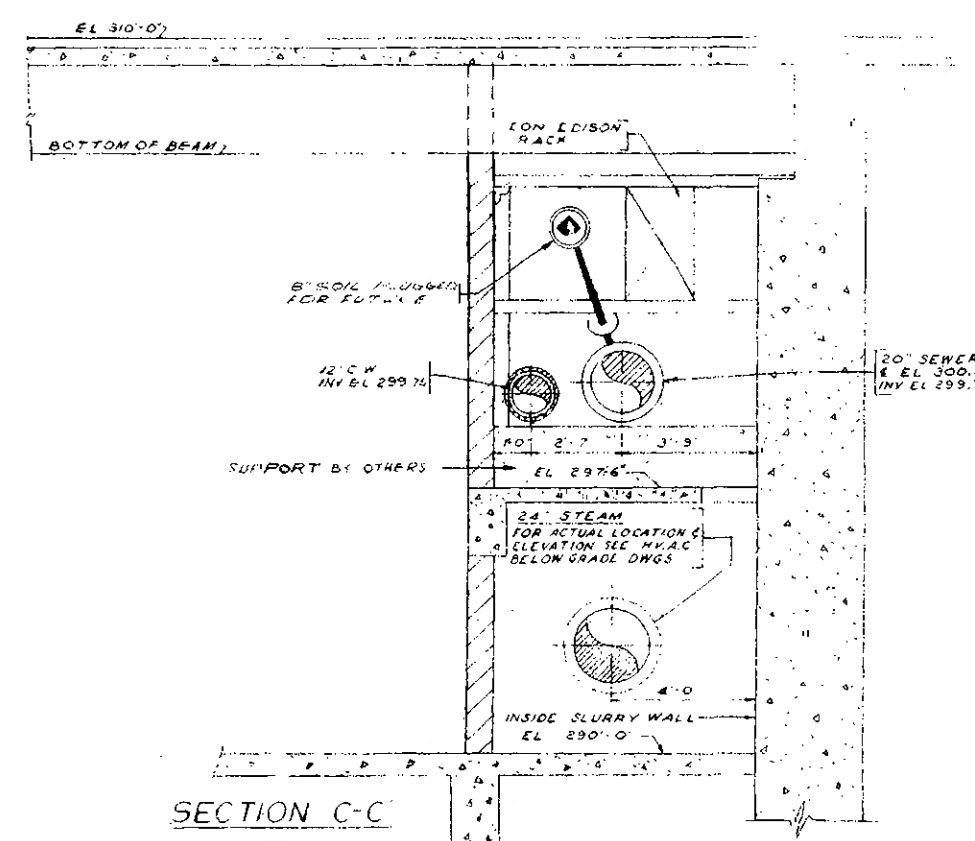
NORTH METER ROOM



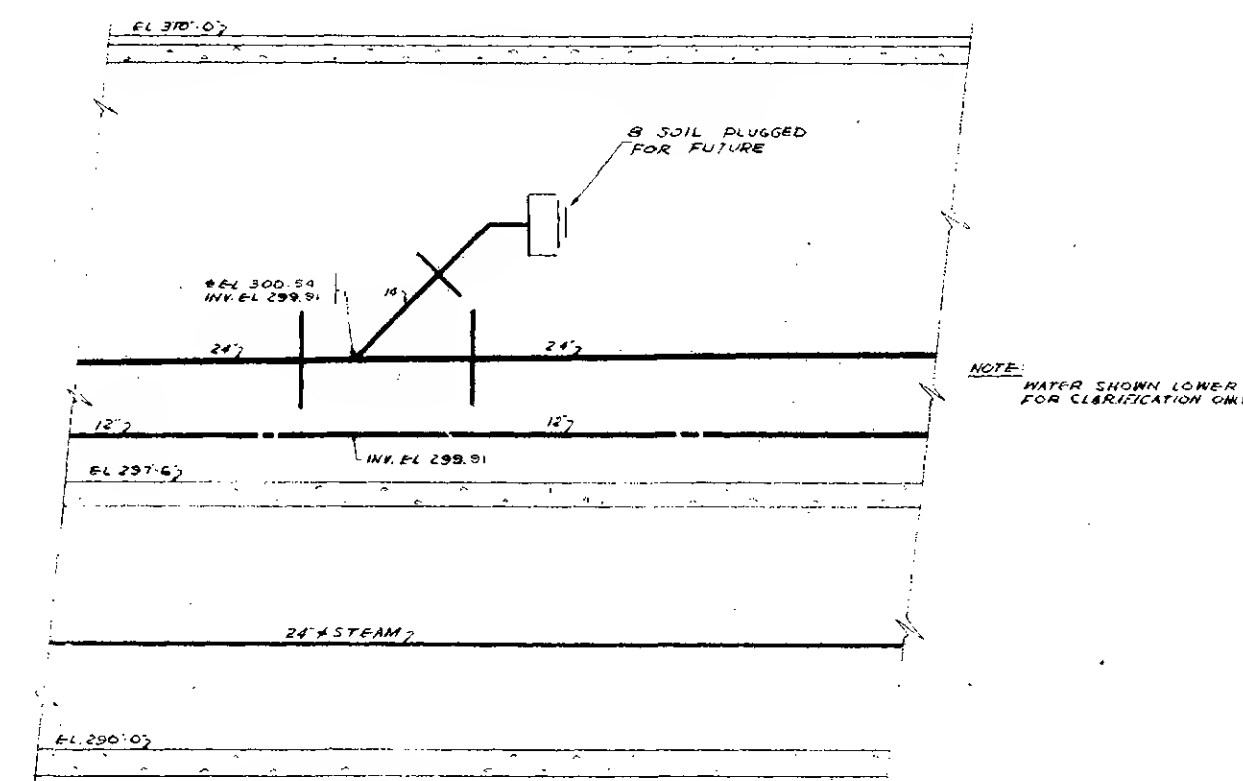
SECTION B-B



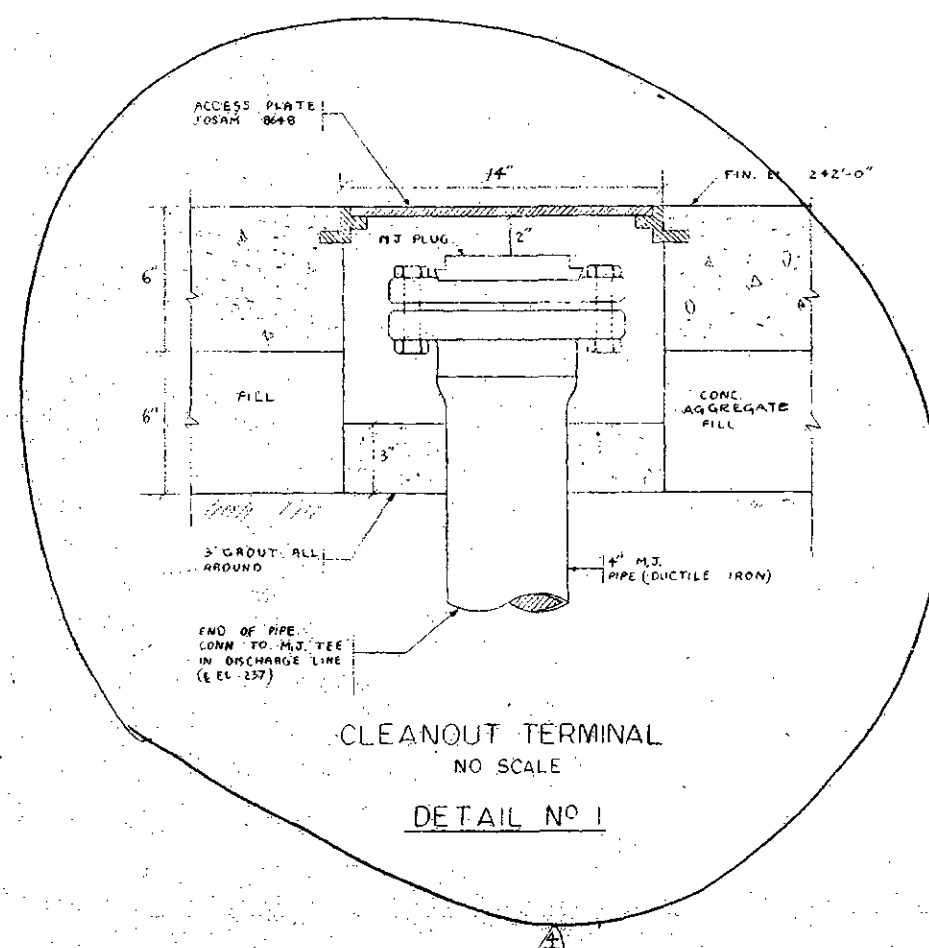
SECTION A-A



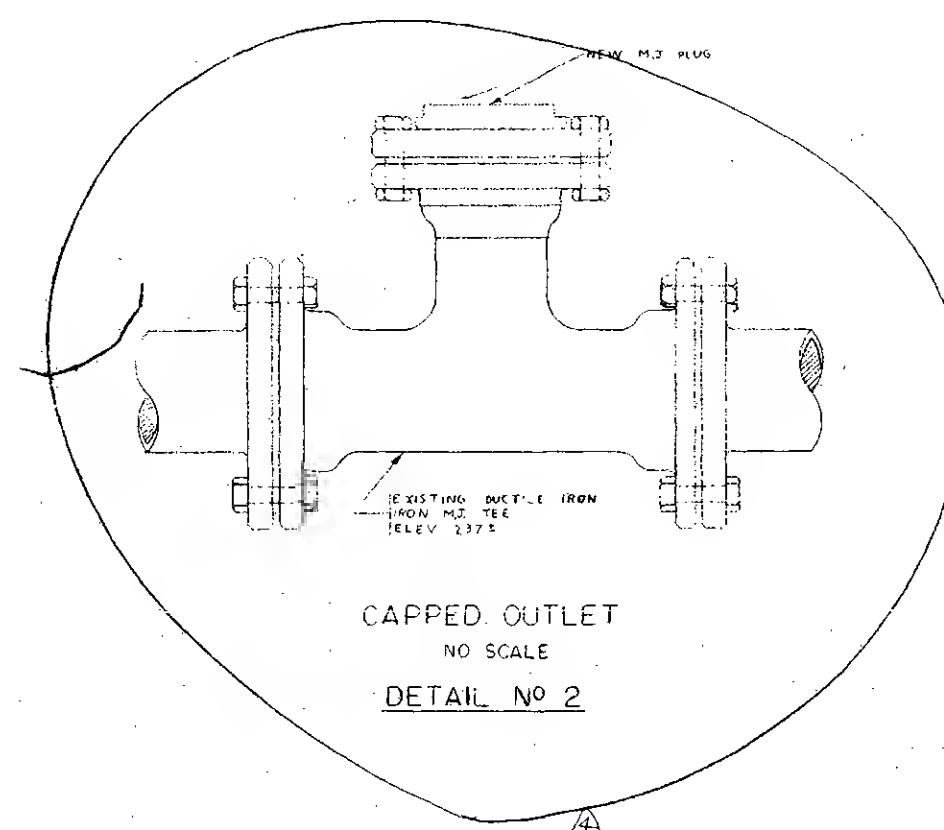
SECTION C-C



SECTION D-D



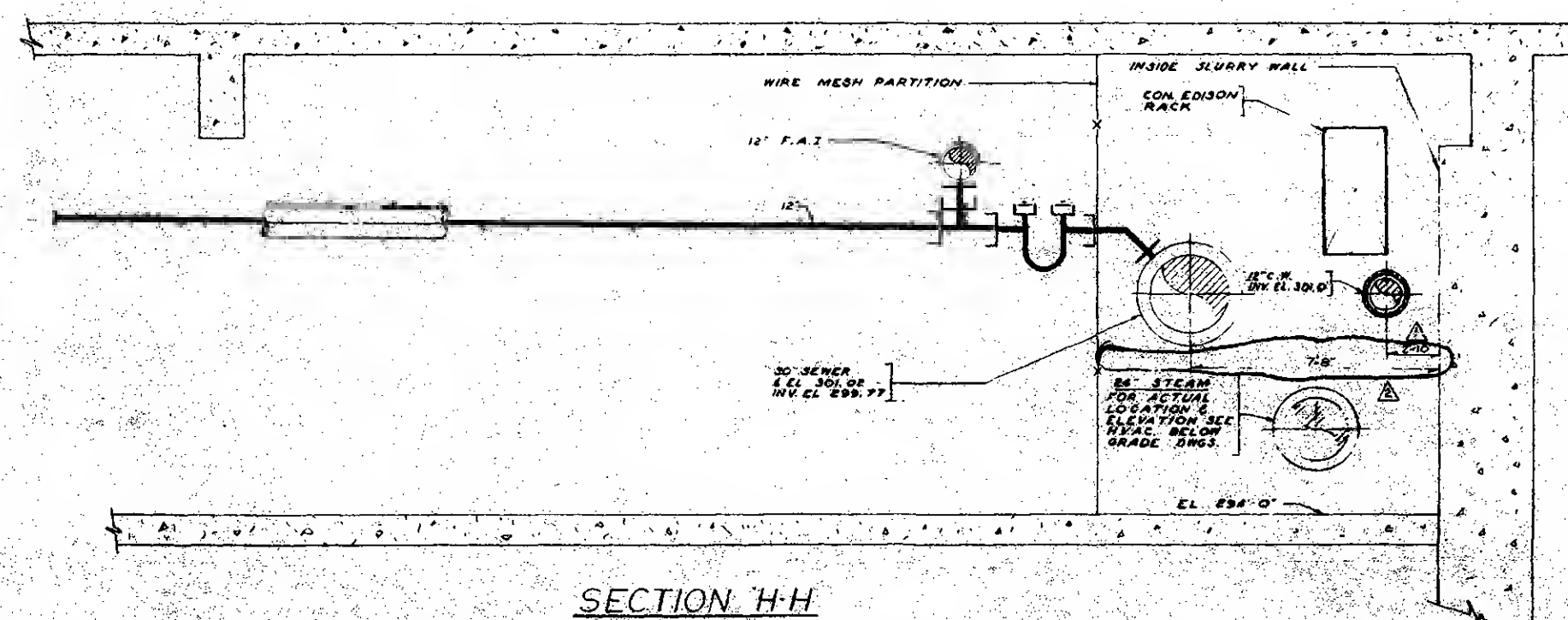
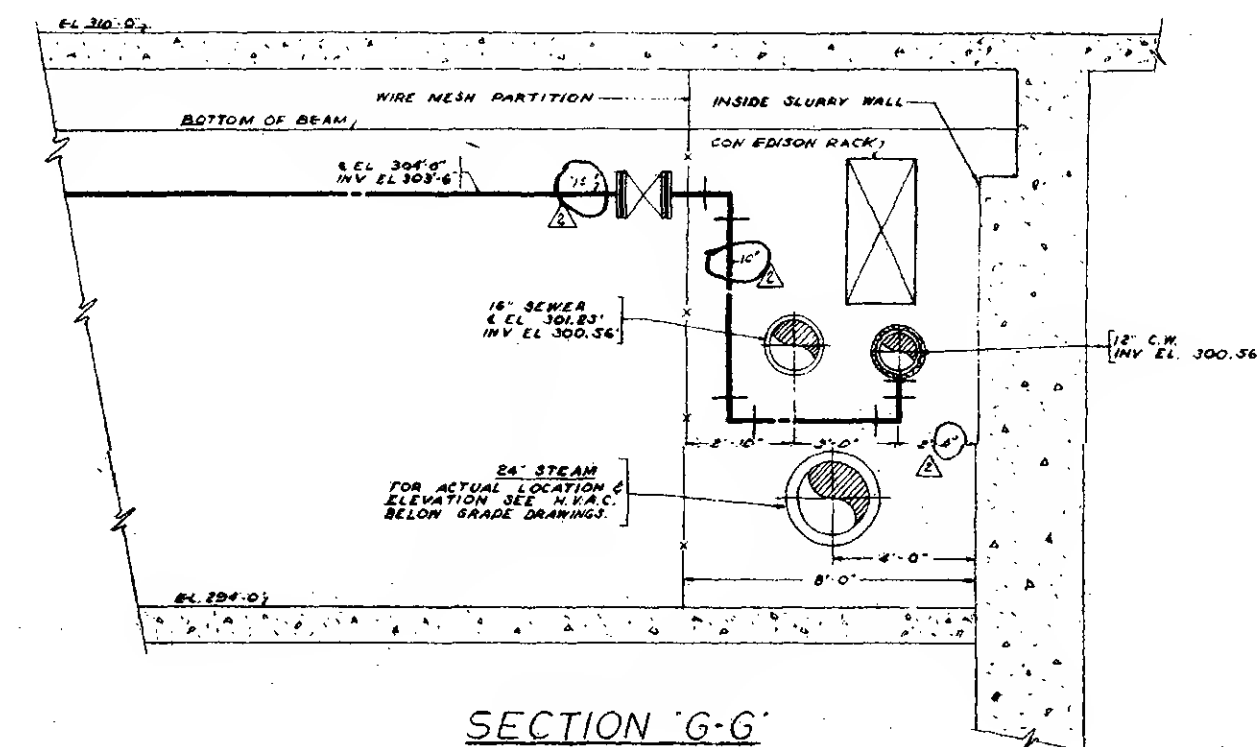
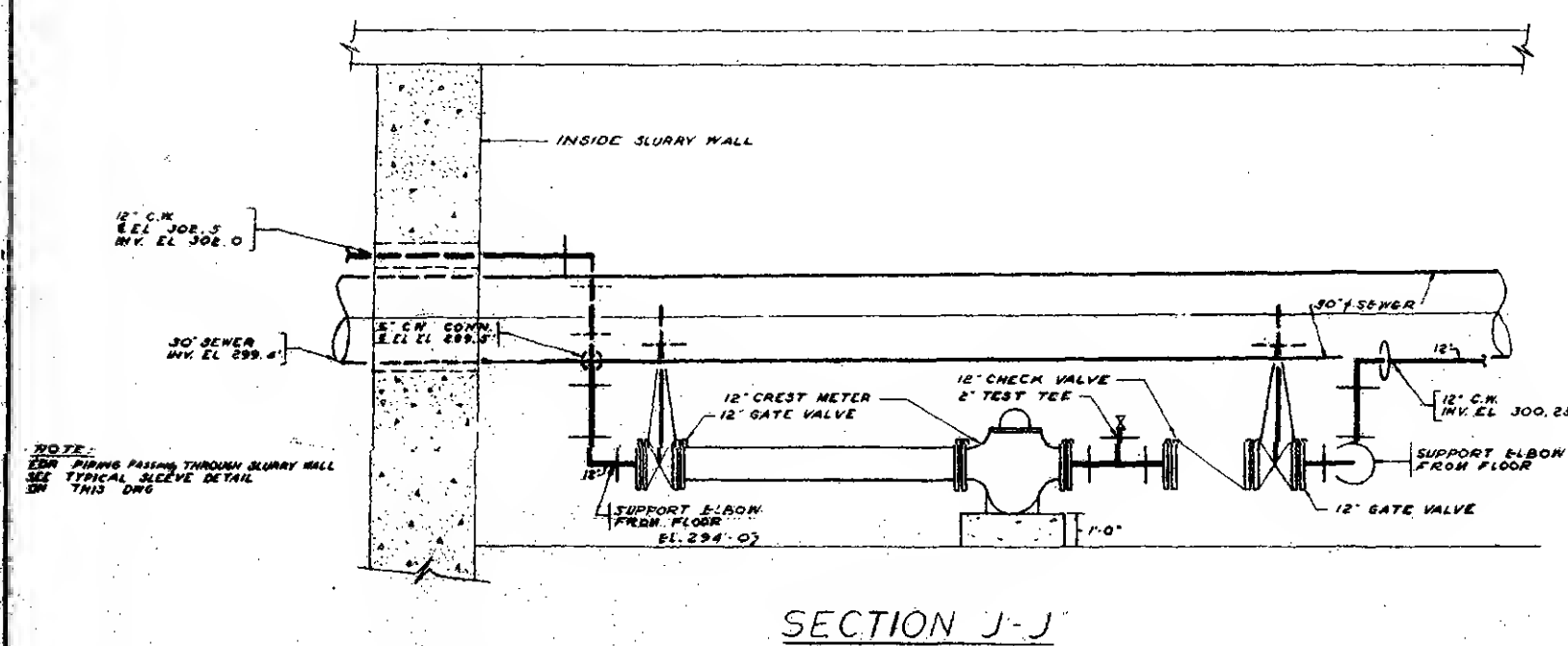
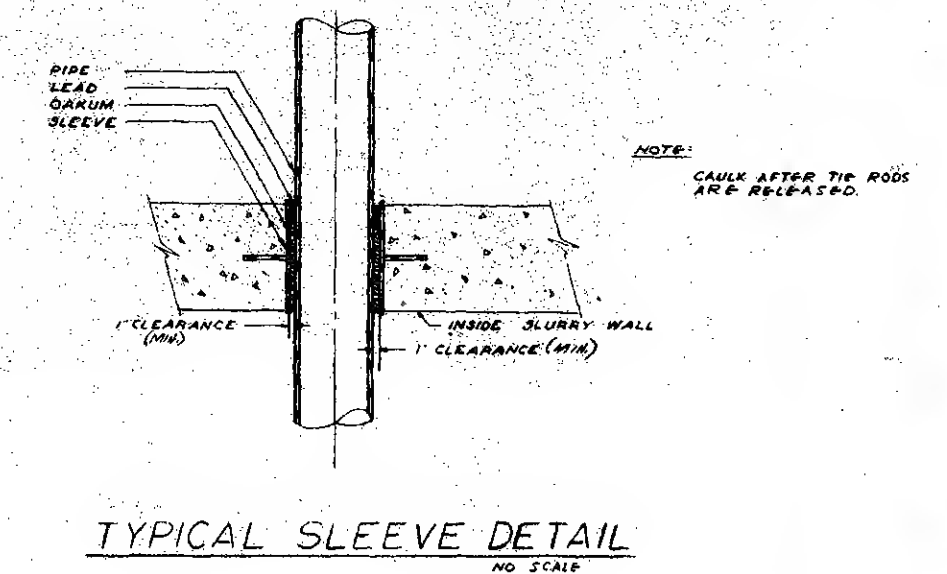
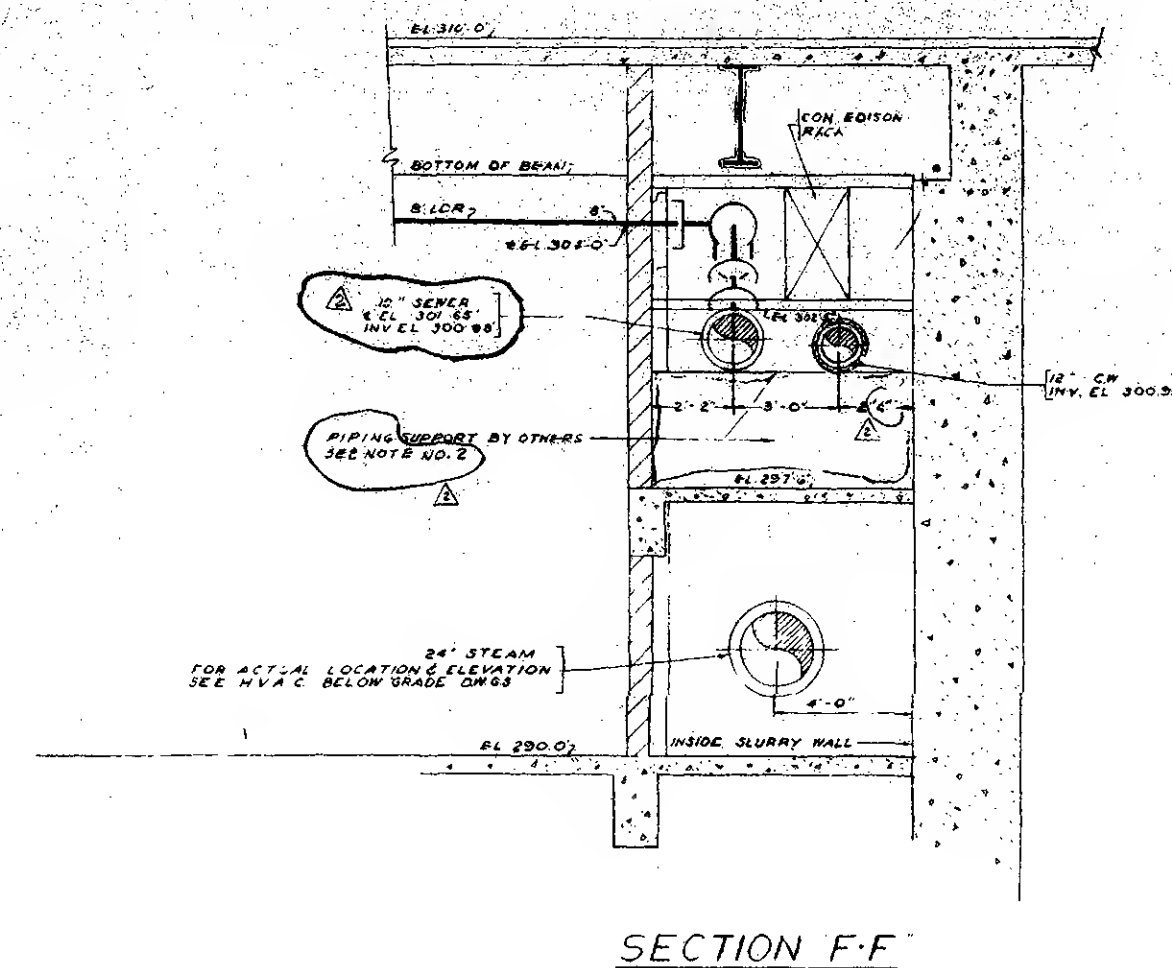
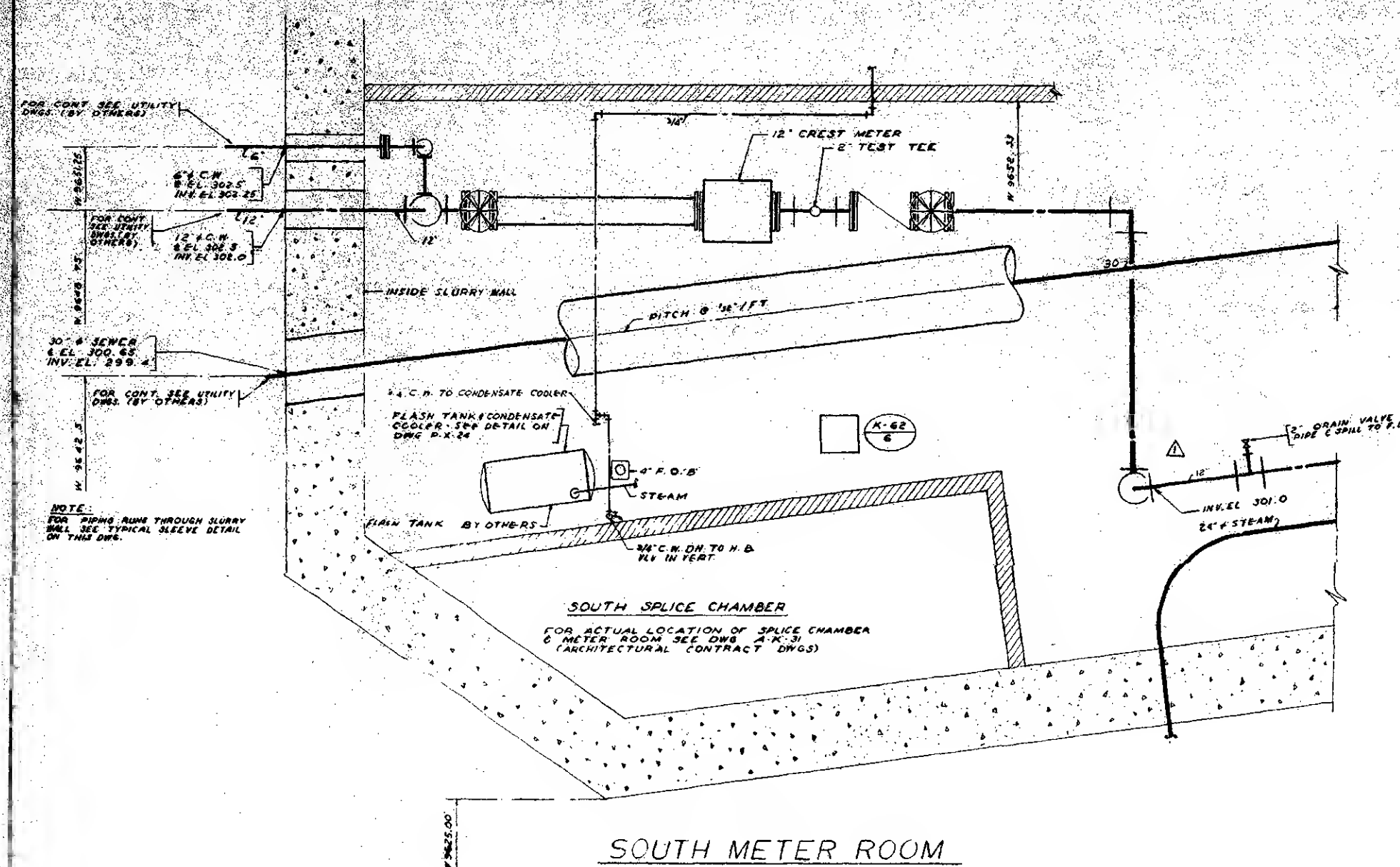
CLEANOUT TERMINAL
NO SCALE
DETAIL No. 1




CAPPED OUTLET
NO SCALE
DETAIL No. 2


- NOTE
1. FOR GENERAL NOTES & SYMBOLS SEE DWS # P.A. 11
 2. CONCRETE SUPPORT PIERNS TO BE BY OTHERS
 3. 1\"/>

THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY				DETAIL SHEET No. 1			
MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT WORTHINGTON, SKILLING, HELLER & JACKSON ELECTRICAL ENGINEERS THE PORT OF NEW YORK AUTHORITY ELECTRICAL ENGINEERS				EMERY ROTH & SONS RICHARD ROTH, ARCHITECT JAROS, BAUM & BOLLES MECHANICAL ENGINEERS PAYING, UTILITIES, FOUNDATIONS			
NO.	DATE	BY	REVISIONS	NO.	DATE	BY	REVISIONS
1	10/2/62	RB		1	10/2/62	RB	
2	11/2/62	SG-G	J.C.	2	11/2/62	SG-G	J.C.
3	12/4/62	SG-G	A.F.	3	12/4/62	SG-G	A.F.
4	1/2/63	SG-G	E.M.	4	1/2/63	SG-G	E.M.
APPROVED				CHIEF, PLANNING DIVISION			
DATE				DATE			
DRAWN				CHECKED			
SCALE				DATE			
PROJECT NUMBER				SHEET			
DRAWING NUMBER				OF			
				P-X-16			



NOTES:

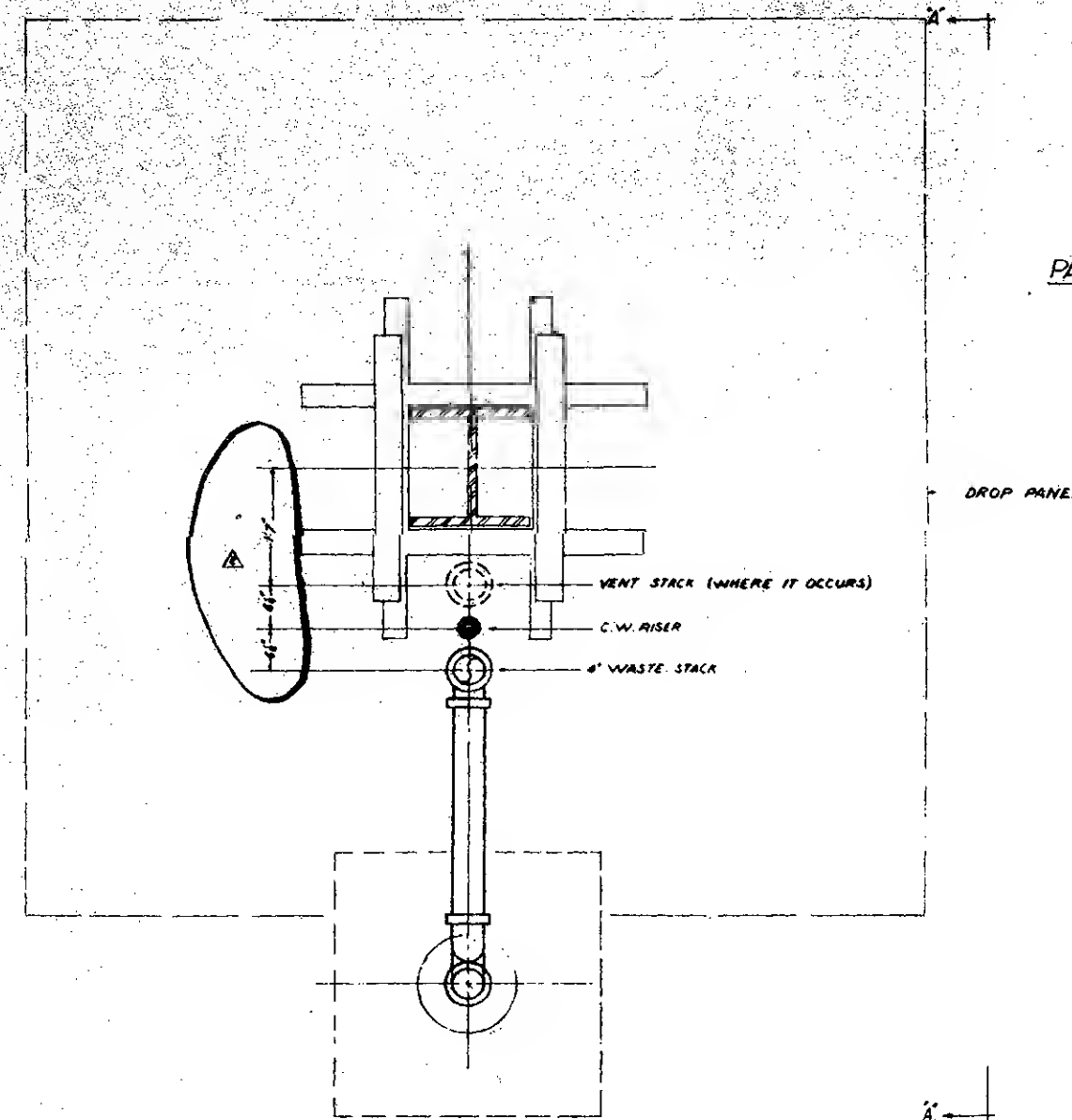
1. FOR GENERAL NOTES & SYMBOLS
SEE DN 6 P. X-27
2. FOR SUPPORTS OF SEWER & WATER
LINES SEE STRUCTURAL DRAWINGS, 
3. 1 INSULATION ON C/W
- 4 FOR LOCATION OF SECTIONS
SEE P. X-15.

				<h2 style="margin: 0;">THE WORLD TRADE CENTER</h2> <p style="margin: 0;">THE PORT OF NEW YORK AUTHORITY</p>				TITLE <h1 style="margin: 0;">DETAIL SHEET No.2</h1>	
---	--	--	--	---	--	--	--	--	--

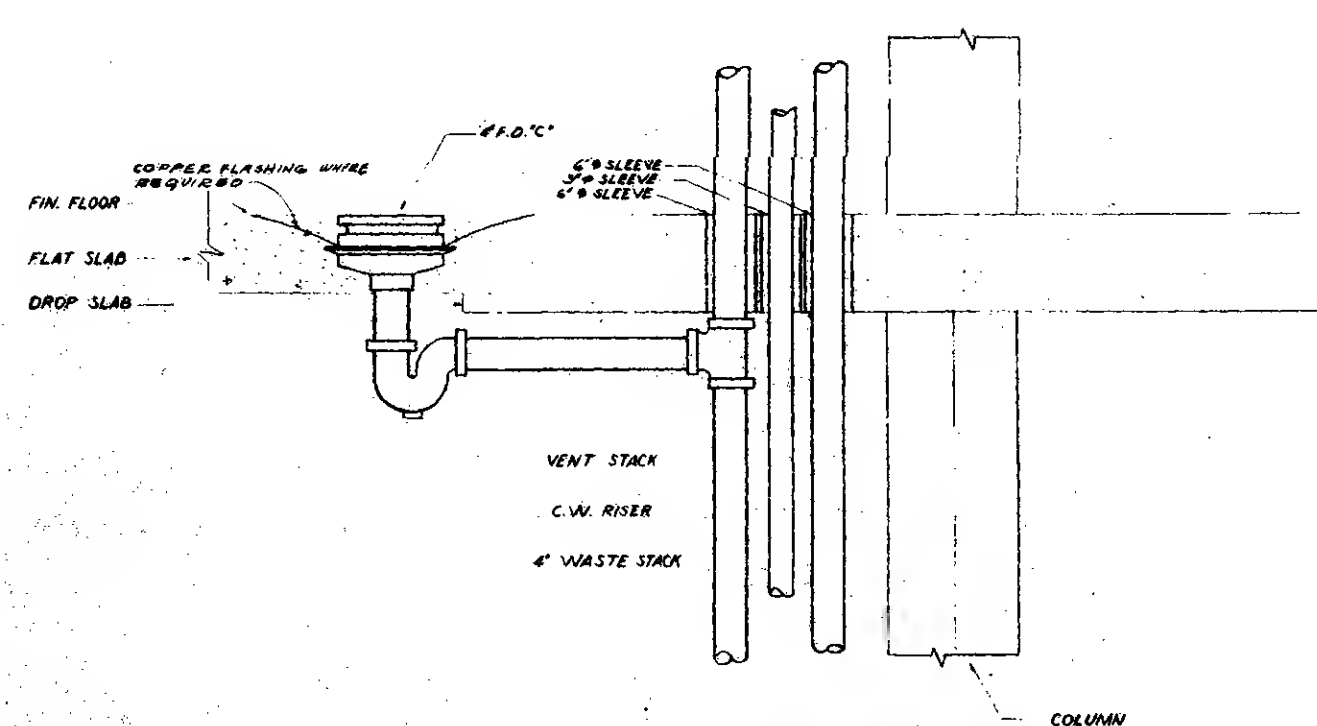
MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT				EMERY ROTH & SONS RICHARD ROSE, ARCHITECT				<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">SHEET NO.</th> <th style="width: 25%;">V.F.N.</th> <th style="width: 15%;">SHEET NO.</th> <th style="width: 45%;">R.A.S.</th> </tr> <tr> <td>NONE</td> <td>NONE</td> <td>5-15-68</td> <td></td> </tr> </table>		SHEET NO.	V.F.N.	SHEET NO.	R.A.S.	NONE	NONE	5-15-68	
SHEET NO.	V.F.N.	SHEET NO.	R.A.S.														
NONE	NONE	5-15-68															

WORTHINGTON SKILLING HEHLER JACSON STREETCRAFT ENGINEERS JOSEPH R. LORING & ASSOCIATES ELECTRICAL ENGINEERS				JAMES BAUM & SOLLER MECHANICAL ENGINEERS THE PORT OF NEW YORK AUTHORITY PAVING, UTILITIES, FOUNDATIONS				<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">SHEET NO.</th> <th style="width: 25%;">V.F.N.</th> <th style="width: 15%;">SHEET NO.</th> <th style="width: 45%;">R.A.S.</th> </tr> <tr> <td>NONE</td> <td>NONE</td> <td>5-15-68</td> <td></td> </tr> </table>		SHEET NO.	V.F.N.	SHEET NO.	R.A.S.	NONE	NONE	5-15-68	
SHEET NO.	V.F.N.	SHEET NO.	R.A.S.														
NONE	NONE	5-15-68															

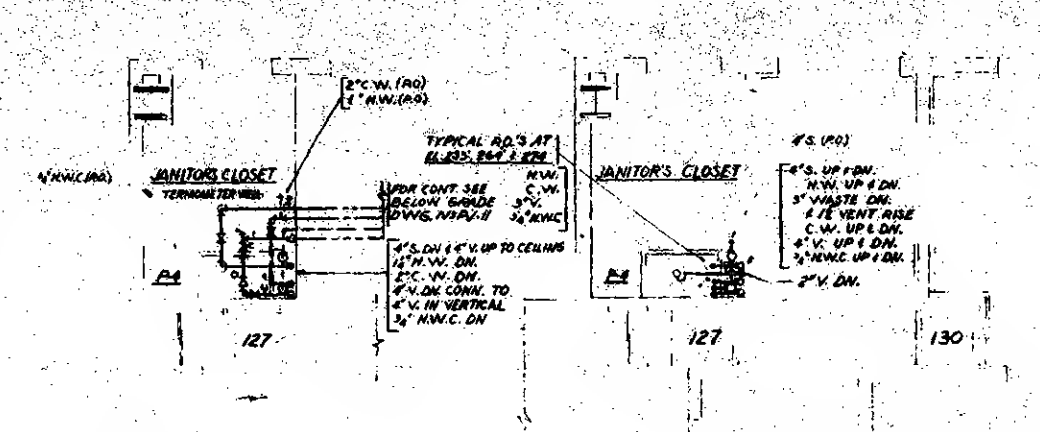
DIVISION DATE: _____				OVER PLANNING DIVISION DATE: _____				P x I 7	
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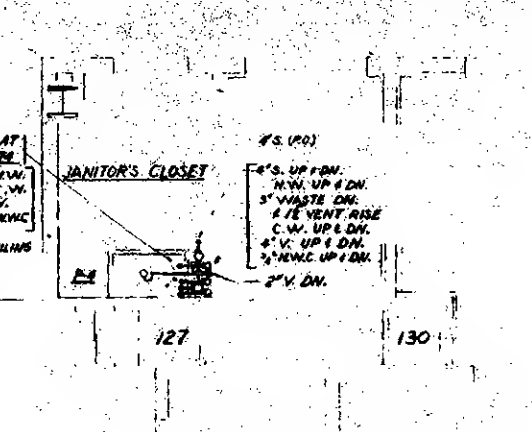
PLAN
DETAIL TYPICAL COLUMNS
4" WASTE STACK - C.V. RISER & VENT STACK
&
LOCATION OF FLOOR DRAIN



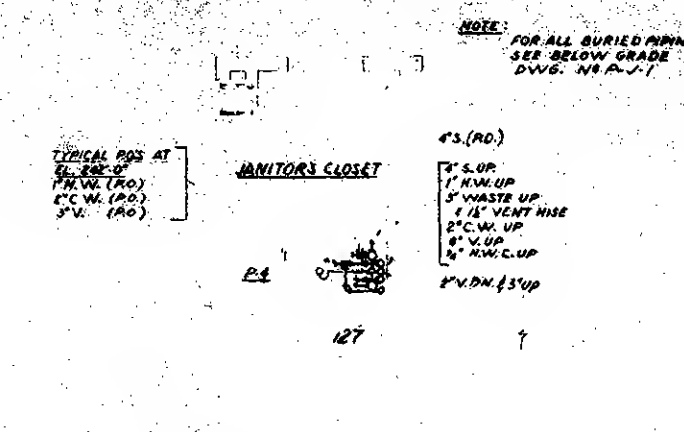
SECTION A-A



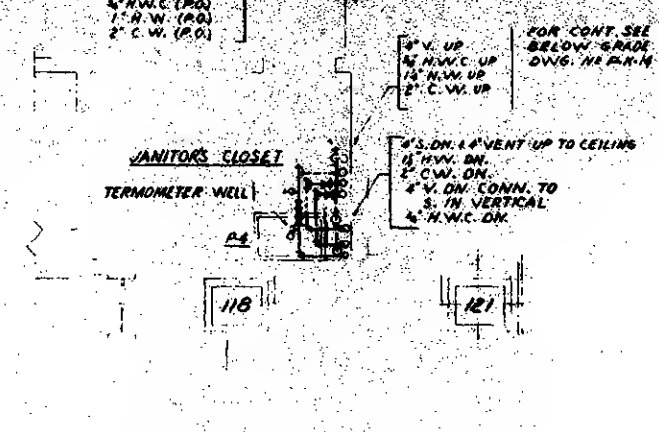
PART PLAN OF MOP RECEPTOR
ZONE 'J' EL. 284'-0"



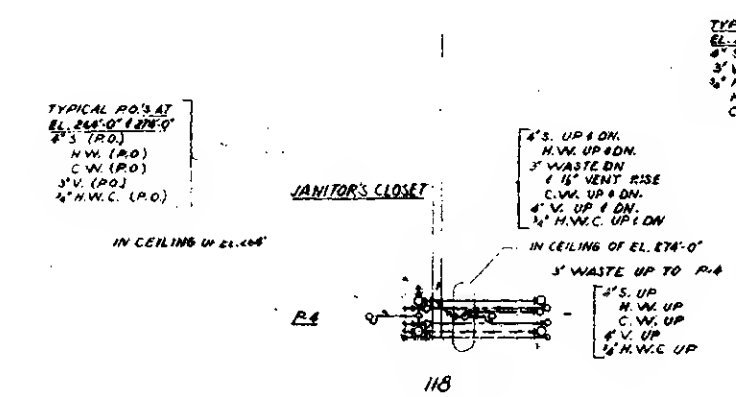
PART PLAN OF MOP RECEPTOR
ZONE 'J' EL. 253'-0" 264'-0" & 274'-0"



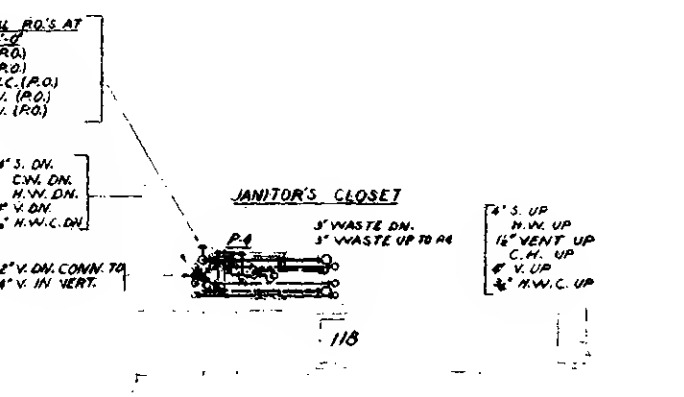
PART PLAN OF MOP RECEPTOR
ZONE 'J' EL. 242'-0"



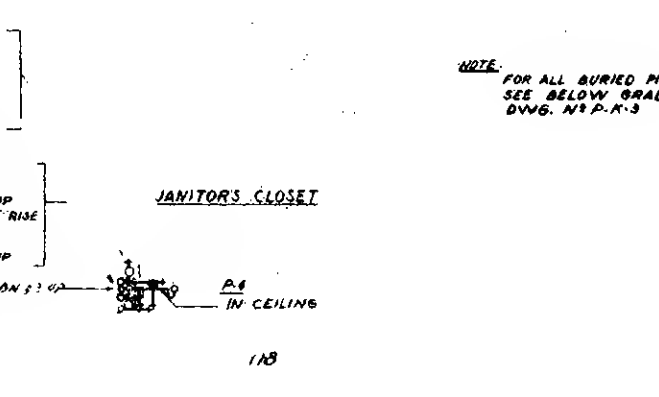
PART PLAN OF MOP RECEPTOR
ZONE 'K' EL. 284'-0"



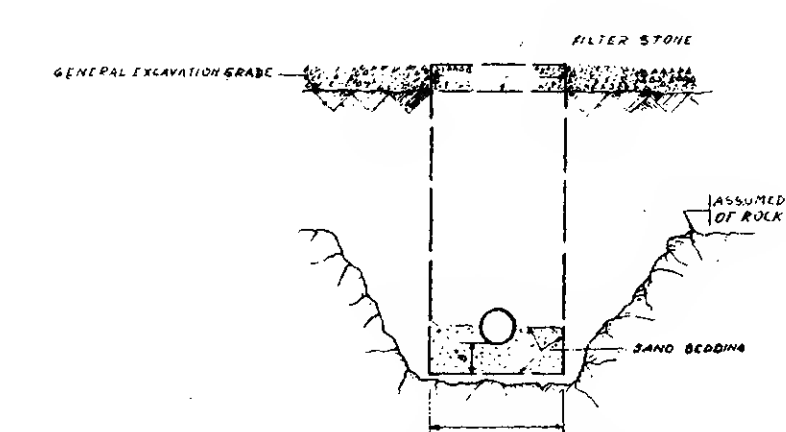
PART PLAN OF MOP RECEPTOR
ZONE 'K' EL. 264'-0" & 274'-0"



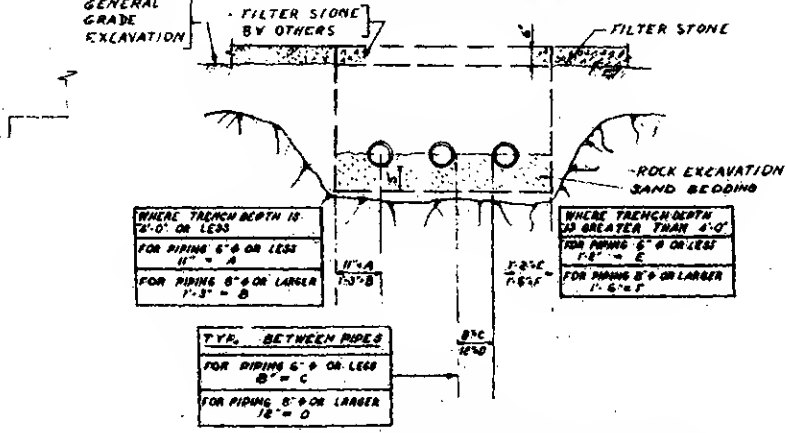
PART PLAN OF MOP RECEPTOR
ZONE 'K' EL. 253'-0"



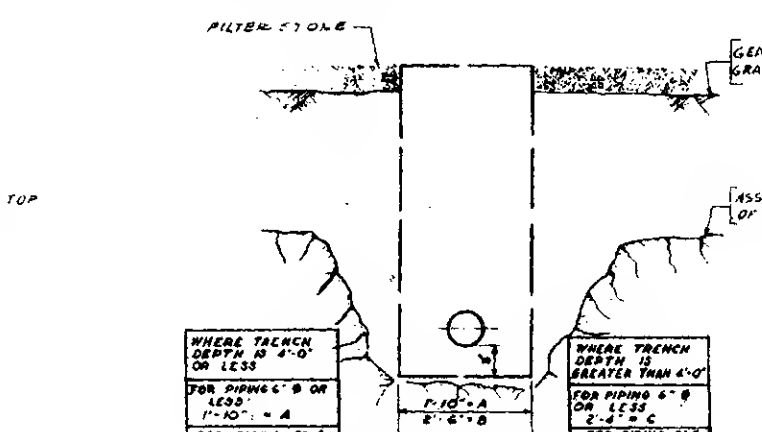
PART PLAN OF MOP RECEPTOR
ZONE 'K' EL. 242'-0"



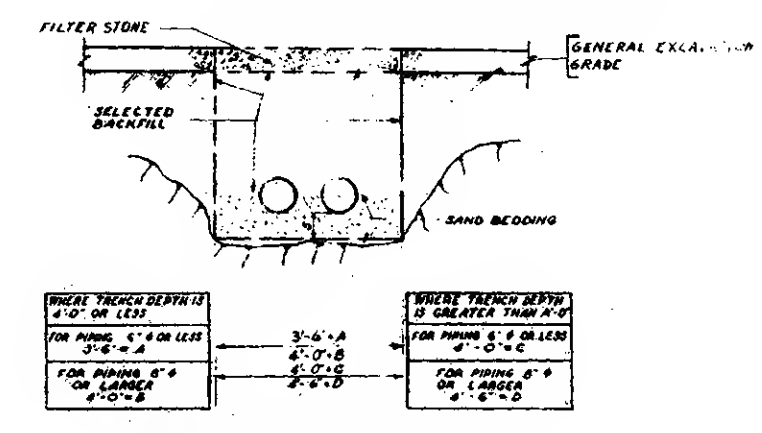
TYPICAL PLUMBING TRENCH



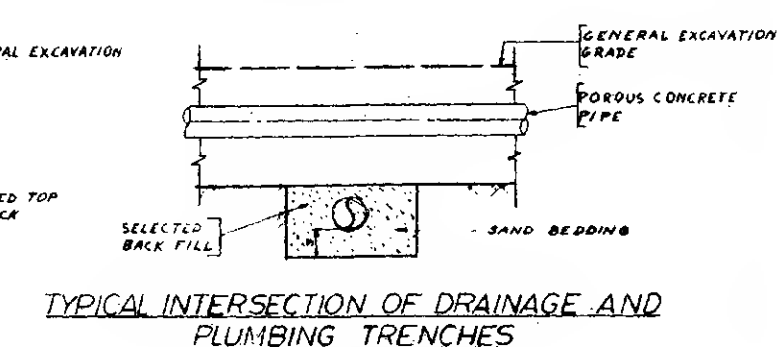
TYPICAL PLUMBING TRENCH
FOR 3 OR MORE PIPES



TYPICAL PLUMBING TRENCH



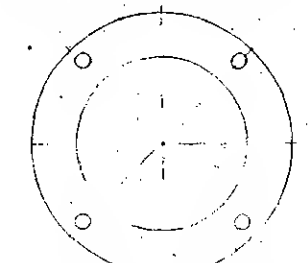
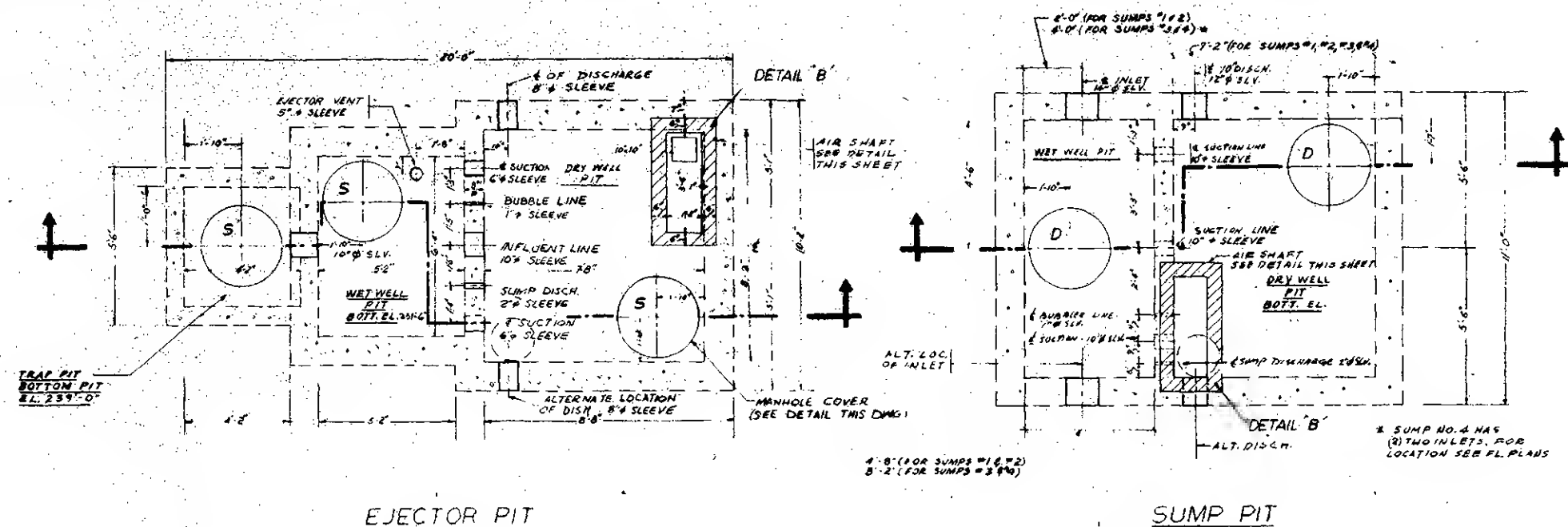
TYPICAL PLUMBING TRENCH
FOR TWO PIPES



TYPICAL INTERSECTION OF DRAINAGE AND
PLUMBING TRENCHES

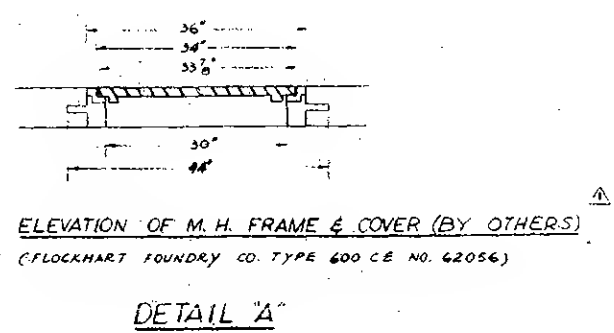
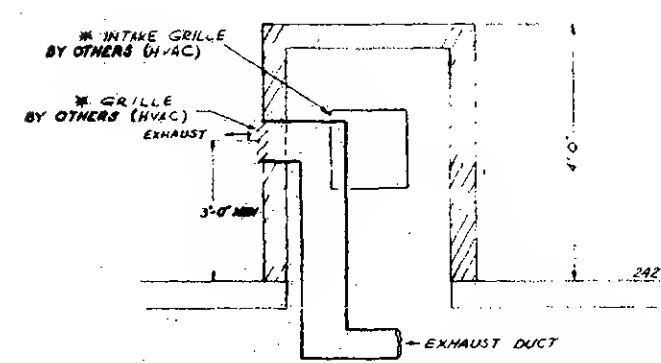
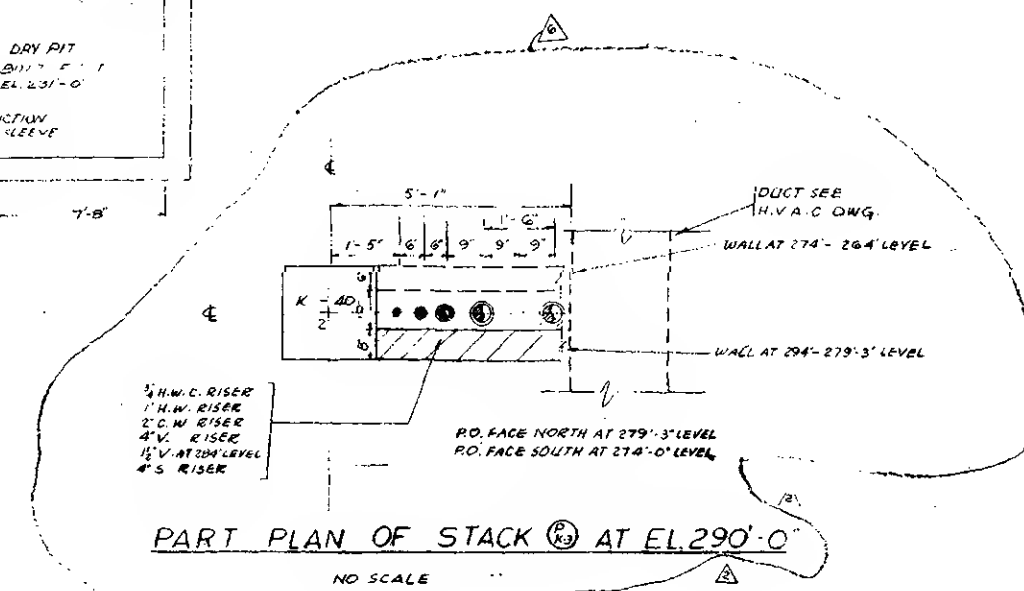
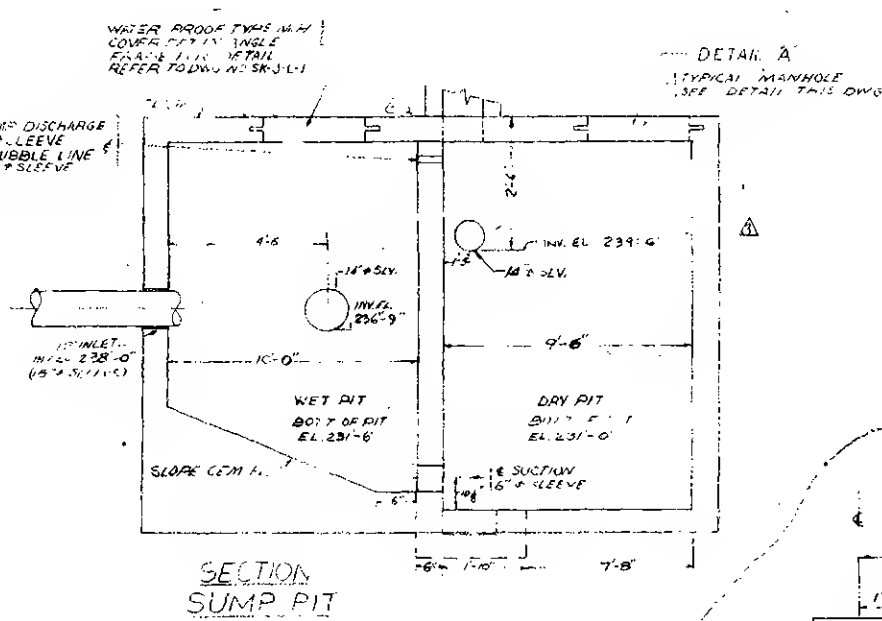
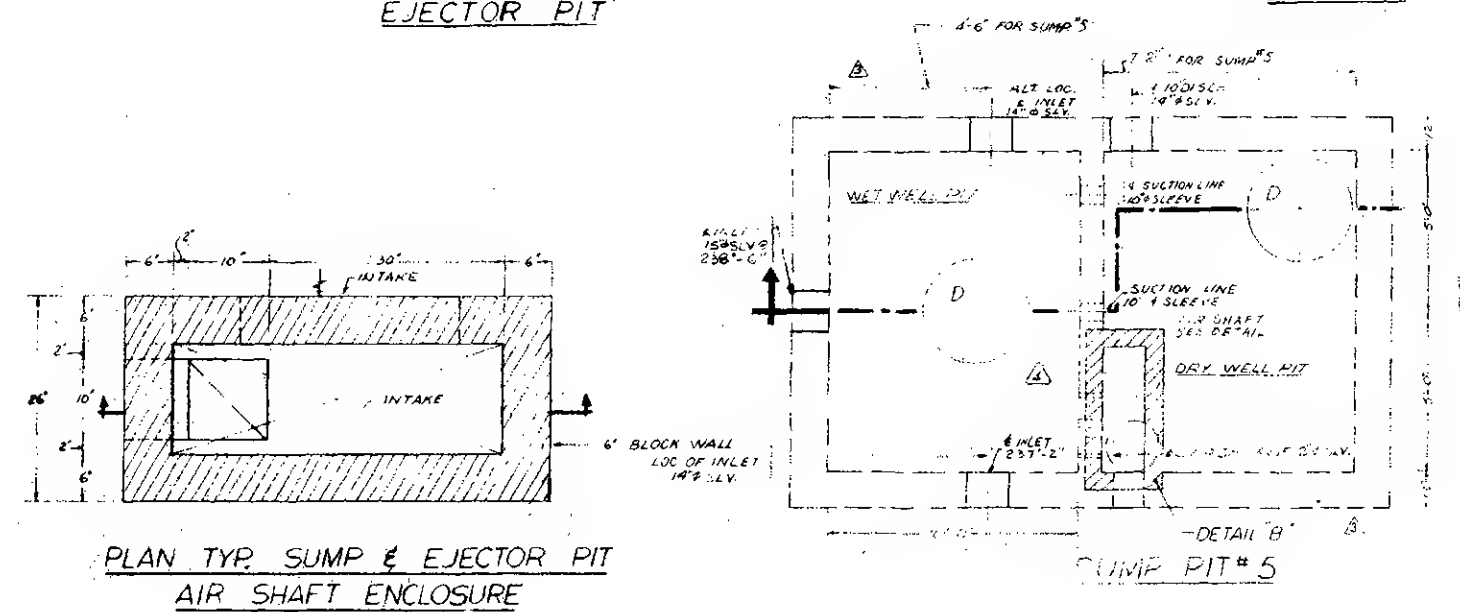
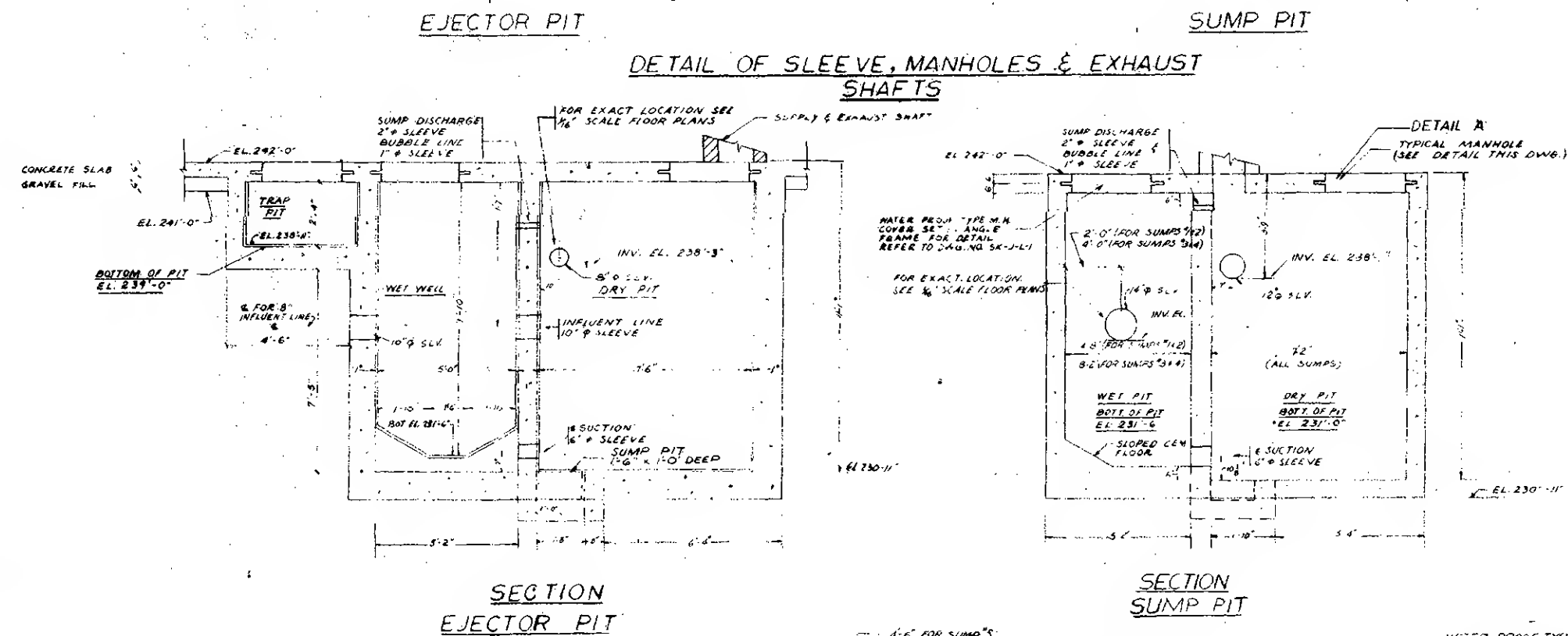
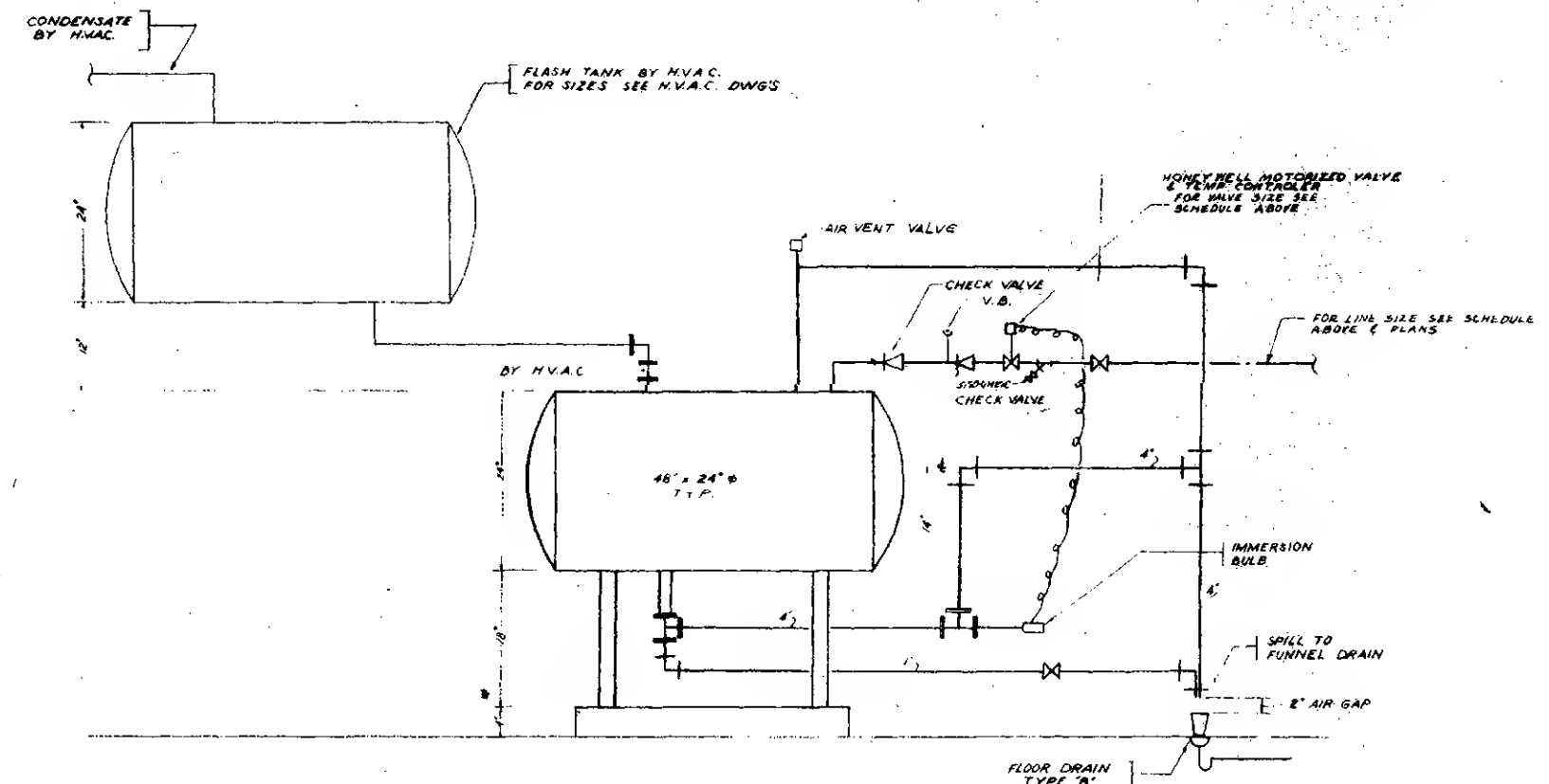
NOTE:
1. FOR GENERAL NOTES & SYMBOLS
SEE DWG. P-X-27
2. FOR TRENCHING DETAILS SEE
DWG. P-X-30, P-X-31, & P-X-32

THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT WORTHINGTON, SKILLING, HELLER & JACKSON STRUCTURAL ENGINEERS JOSEPH H. LORING & ASSOCIATES ELECTRICAL ENGINEERS		SMERY ROTH & SONS RICHARD ROTH, ARCHITECT JAROS, BAUM & SOLLES MECHANICAL ENGINEERS THE PORT OF NEW YORK AUTHORITY PAVING, UTILITIES, FOUNDATIONS		TITLE DETAIL SHEET No. 4 DRAWN JE CHECKED FAS SCALE NONE DATE 5-15-68 PROJECT NUMBER P-X-19
REVISIONS NO. DATE 1 10-24-68 2 11-21-68		APPROVED DATE 11-21-68		CHIEF, PLANNING DIVISION DATE



SCHEDULE FOR CONDENSATE TANK WATER VALVE

CONDENSATE COOLER	VALVE SIZE	LINE SIZE (INCLUDING ALL OTHER VALVES)	QAM R/F.D.	PRER. DRIP
#1	1/2"	1/2"	1/2"	2 PSI
#2	1/2"	1/2"	1/2"	2 PSI
#3	1/2"	1/2"	1/2"	2 PSI
#4	1/2"	1/2"	1/2"	2 PSI
#5	1/2"	1/2"	1/2"	2 PSI



NOTE: 1. FOR GENERAL NOTES & SYMBOLS SEE DWG. NO. P-X-2

NO.	DATE	REV.	NO.	DATE	REV.
1	5-11-70	56-51	1	5-11-70	56-51
2	5-12-70	56-5	2	5-12-70	56-5
3	5-12-70	56-10	3	5-12-70	56-10
4	5-12-70	56-6	4	5-12-70	56-6
5	5-12-70	56-2	5	5-12-70	56-2

APPROVED: _____
CHIEF, PLANNING DIVISION
DATE: _____

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

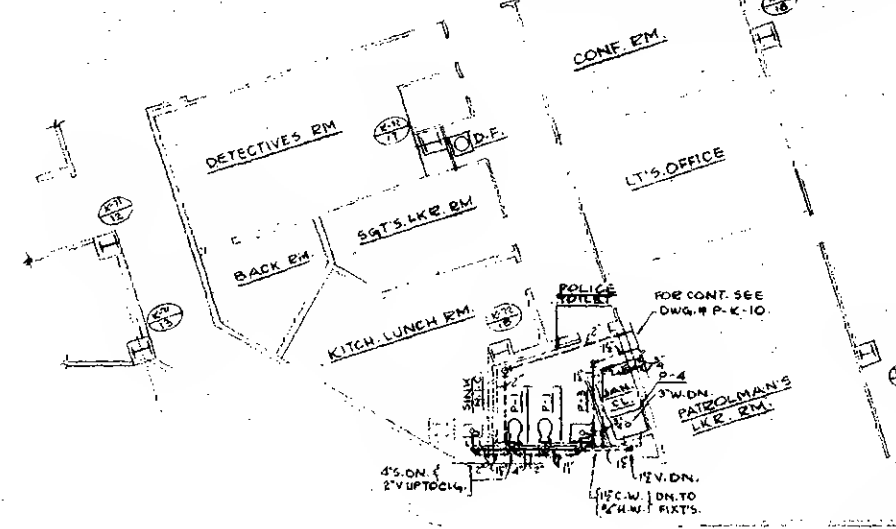
WORTHINGTON, SKILLING, HELLER & JACKSON
STRUCTURAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH R. LOBING & ASSOCIATES
ELECTRICAL ENGINEERS

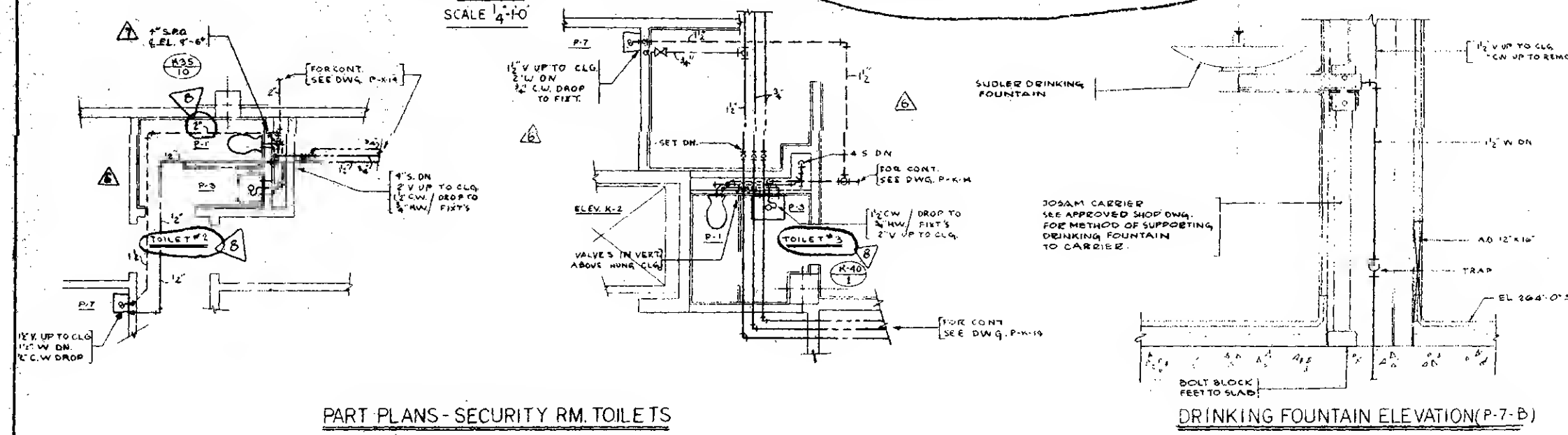
THE PORT OF NEW YORK AUTHORITY
PAYING, UTILITIES, FOUNDATIONS

TITLE		DRAWN		CHECKED		DATE	
DETAIL SHEET NO. 5		J.E.	F.A.S.				
SCALE	NONE	DATE	5-15-68				
PROJECT NUMBER		SHEET	OP				
DRAWING NUMBER	P-X-20						



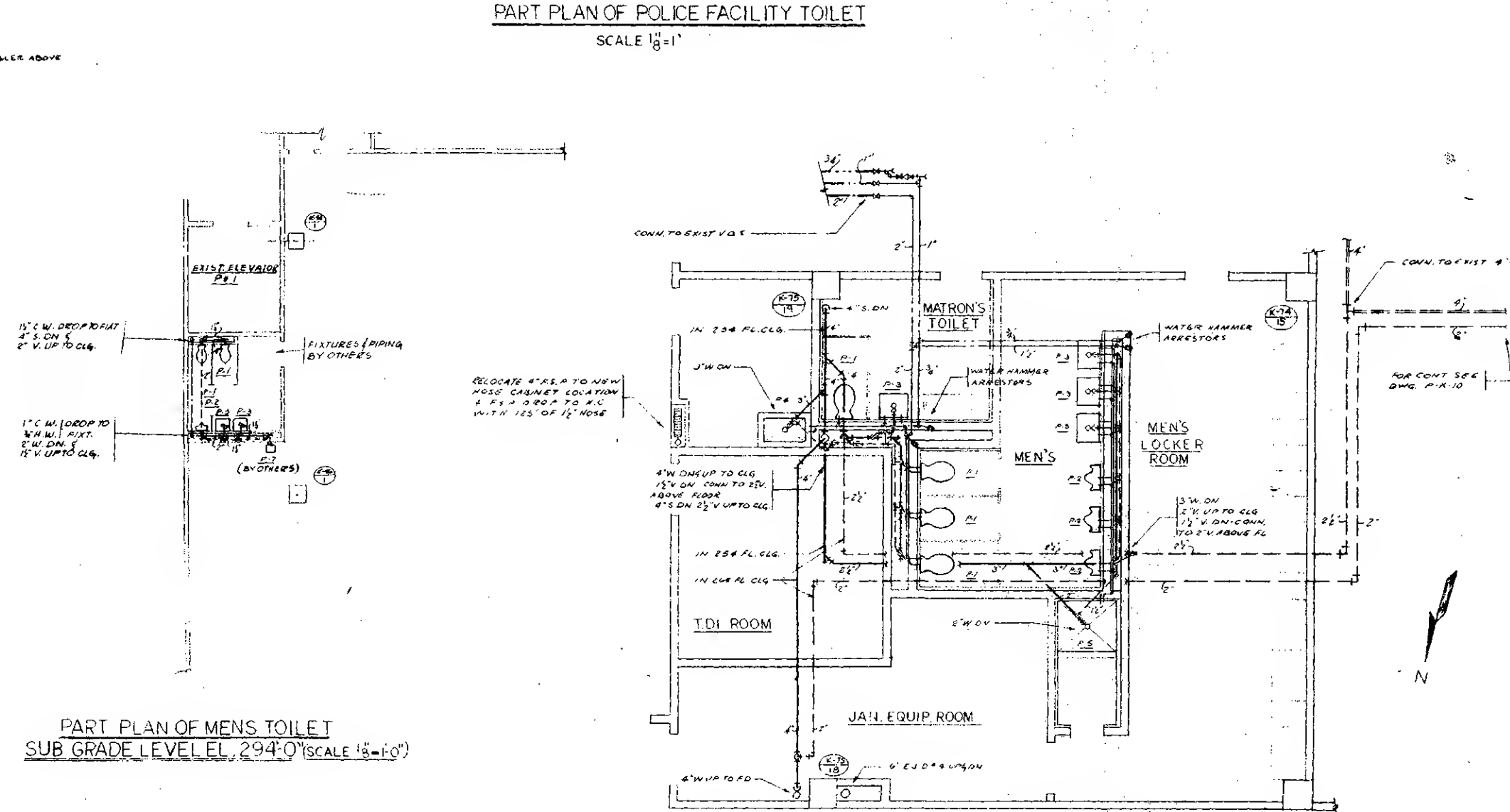
PART PLAN-SECURITY RM. TOILET
EL. 294'-0"
SCALE: 1/8"=1'-0"

PLAN
NO SCALE



EL. 294
SCALE $\frac{1}{4}'' = 1'-0''$

DRINKING FOUNTAIN ELEVATION(P-7-B)

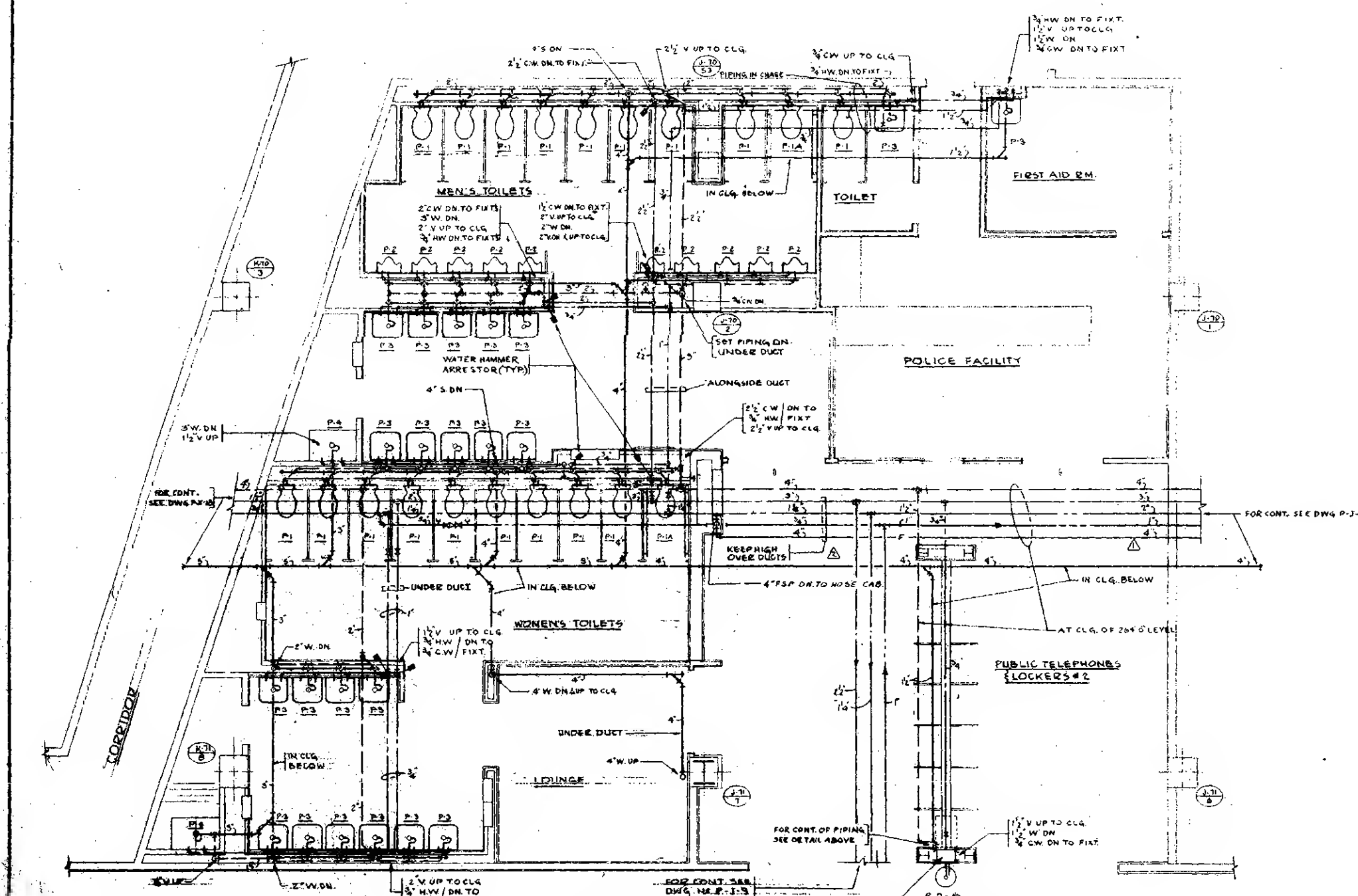


PART PLAN OF POLICE FACILITY TOILET

PART PLAN OF MENS TOILET
SUB GRADE LEVEL EL. 294'-0" (SCALE 1/8"=1'-0")

PART PLAN - JANITORIAL SUPPORT AREA

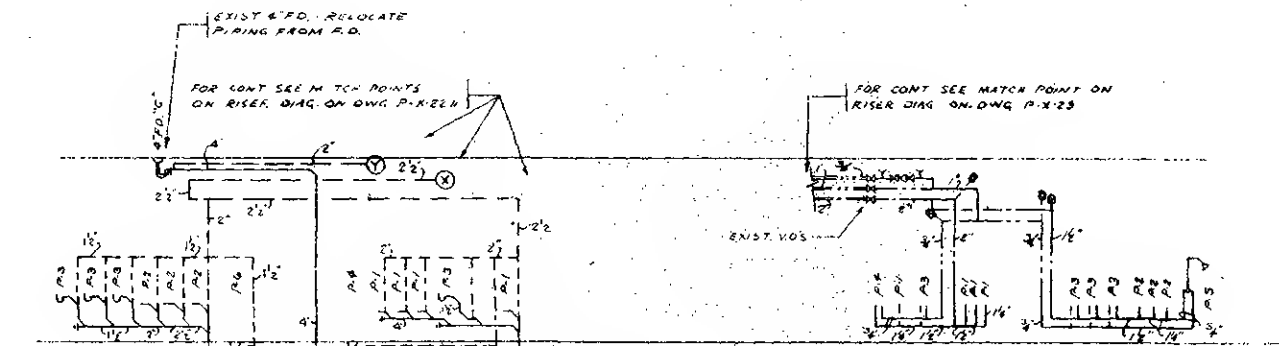
EL. 264'
SCALE 1/2" = 1'-0"



PART PLAN PATH. TOILET

EL. 264

SCALE $\frac{1}{4}'' = 1'-0''$

[illegible]

PART SANITARY RISER

∴ PART WATER RISER

[illegible]

CHIEF, PLANNING DIVISION	
DATE	

THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES

EMERY ROTH & SONS

MINORU YAMASAKI, ARCHITECT

RICHARD ROTH, ARCHITECT

WORTHINGTON, SKILLING, HELLE & JACKSON
STRUCTURAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY
PAYING, UT. LITER. FOUNDATIONS

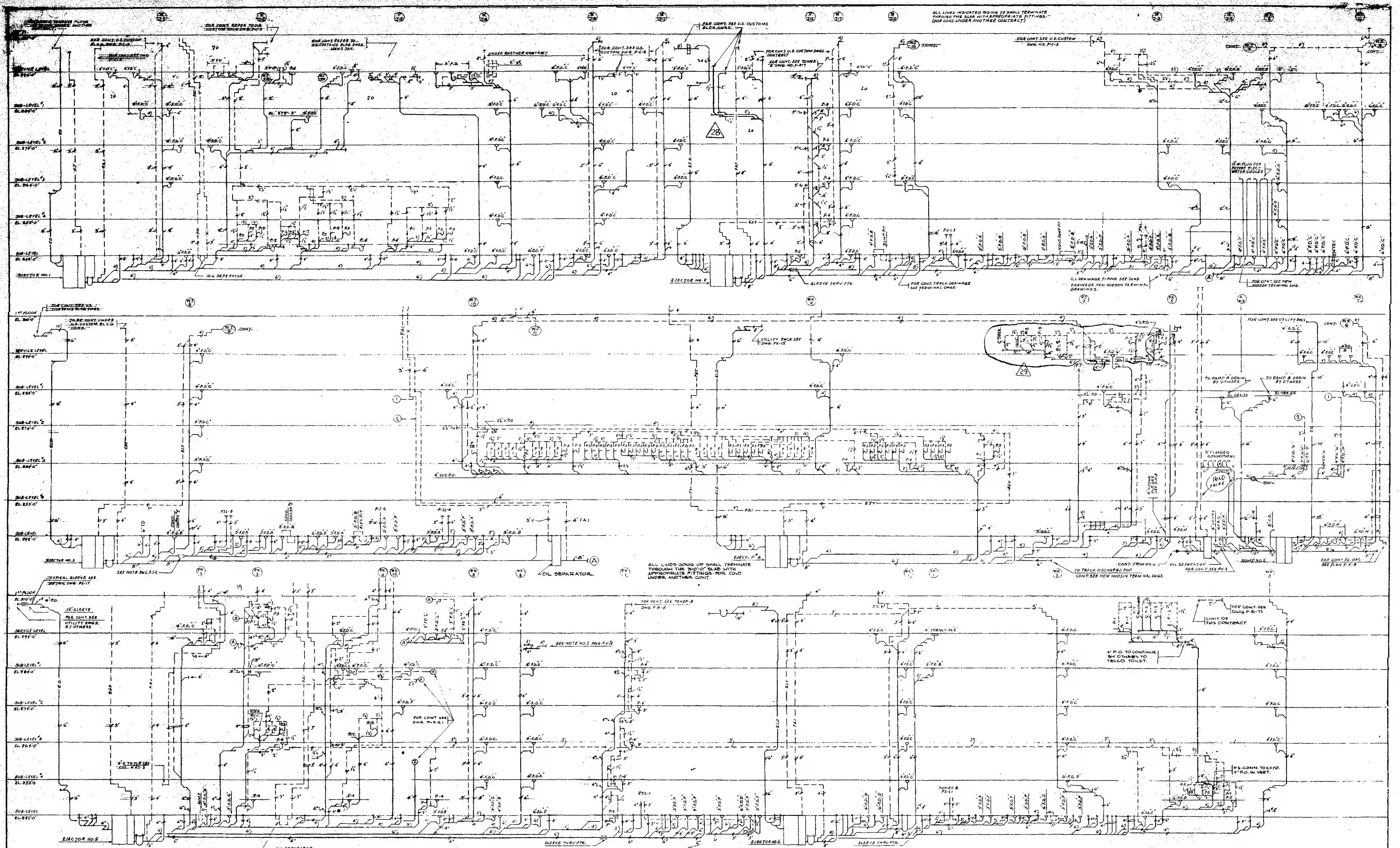
TITLE
DETAIL SHEET NO. 6

DETAIL SHEET NO 6

DRAWN	S. J. C.	CHECKED	F. A. S.
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SCALE	AS NOTED	DATE	1-21-69
PROJECT			

PROJECT NUMBER:	444



SANITARY RISER DIAGRAM

	KEY OF SYMBOLS
CLEAN OUT @ DECK PLATE	
CLEAN OUT AT BASE OF STACK	
INCREASOR	
RUNNING TRAP	
2" OR 3" OR 4" RANWAYS	
RUNNING TRAP	
1" SINGLE CLEANOUT	
PLUGGED OUTLET - FUTURE VENT STACK	
PLUGGED OUTLET - FUTURE WASTE @ SOIL STACK	
PLUGGED OUTLET FUTURE NO RENTAL	

NOTE

1. FOR GENERAL NOTES AND SYMBOLS
SEE DWG. NO. P-X-27

29	4-16-74	64-250	1	10	2-17-74	64-163	1	10	3-20-74	58-50	53C
29	4-16-74	64-250	1	10	2-17-74	64-163	1	10	3-20-74	58-53	21
28	1-16-74	64-256	RD	10	2-12-74	64-162	1	10	2-19-74	58-16	53C
27	5-8-74	56-806	RD	17	2-17-74	64-158	2	7	2-19-74	58-16	3.1
26	5-8-74	56-808	RD	16	1-27-74	56-808	5	6	10-10-74	51-82	1.5
25	5-8-74	56-171	RD	10	2-27-74	56-170	5	6	3-3-74	49-16	1.5
24	5-8-74	56-207	RD	14	1-27-74	56-209	5	6	3-3-74	49-16	1.5
23	12-3-74	64-165	RD	18	7-22-74	56-164	3	13	7-20-74	50-16	6
22	10-6-74	56-173	1	11	3-17-74	58-31	1	12	5-7-66	5-6	2.6
21	10-17-74	56-191	1	11	3-20-74	56-165	1	11	7-10-66	5	1
20	DATE	REF	BY	DATE	REF	BY	DATE	DATE	DATE	DATE	DATE

CHIEF, PLANNING DIVISION
 DATE

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

WORTHINGTON, SKILLING, HELLE & JACKSON
STRUCTURAL ENGINEERS
JOSEPH R. LEON & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

JAROS, BAUM & BOLES
MECHANICAL CONTRACTORS
THE PORT OF NEW YORK AUTHORITY,
PAVING, UTILITIES, FLOOD TIONS

TITLE

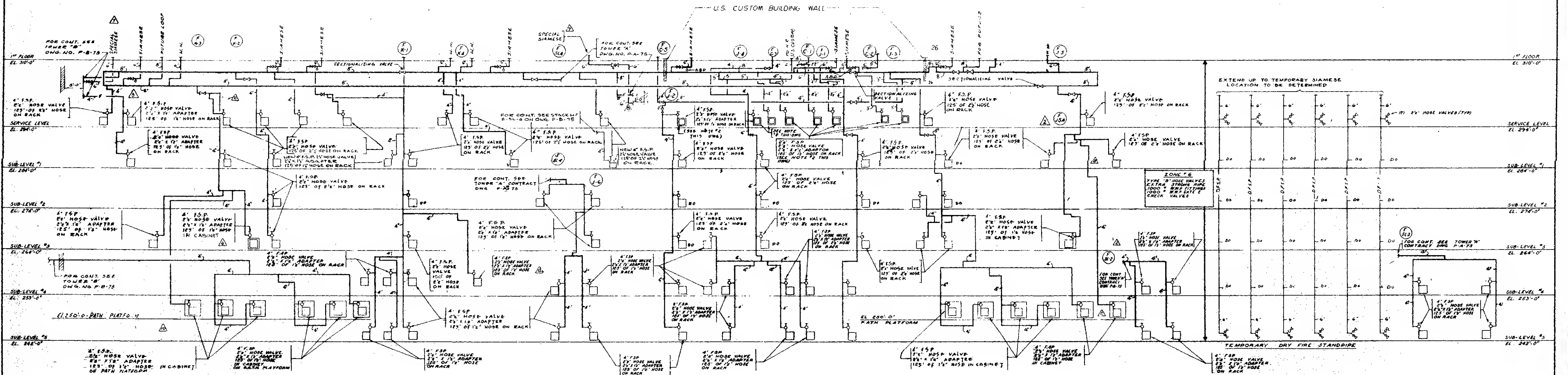
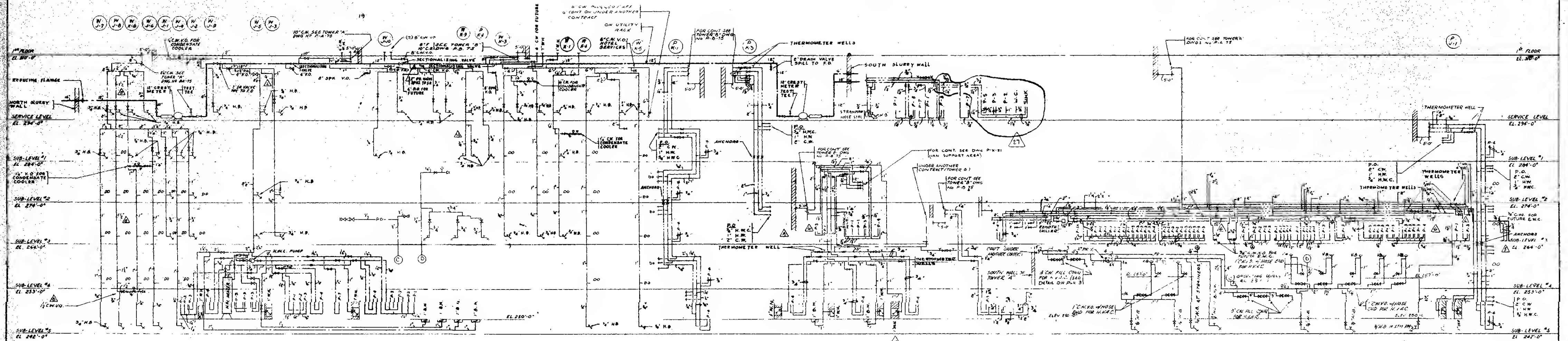
SANITARY
RISER DIAGRAM

DRAWN	J.D.	CHECKED	F/S.
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SCALE	NONE	DATE	5-15-68
-------	------	------	---------

DATE	10/10/75
BY	10/10/75
NO.	10/10/75
NAME	10/10/75
ADDRESS	10/10/75
CITY	10/10/75
STATE	10/10/75
ZIP	10/10/75
TELEPHONE	10/10/75
TELETYPE	10/10/75
FAX	10/10/75
EMAIL	10/10/75
WWW	10/10/75
OTHER	10/10/75

15. (1988) P-X-22 31 5



NOTES:
1. FOR GENERAL NOTES & SYMBOLS SEE DWG. P-X-27
2. PROVIDE HOSE VALVE FOR FUTURE HOSE RACK (H.R. TO BE FURNISHED & INSTALLED UNDER ANOTHER CONTRACT)

NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY
1	12-13-71	16-165	BV	11	1-11-72	16-165	BV	12	1-11-72	16-165	BV
2	1-11-72	16-165	BV	13	1-11-72	16-165	BV	14	1-11-72	16-165	BV
3	1-11-72	16-165	BV	15	1-11-72	16-165	BV	16	1-11-72	16-165	BV
4	1-11-72	16-165	BV	17	1-11-72	16-165	BV	18	1-11-72	16-165	BV
5	1-11-72	16-165	BV	19	1-11-72	16-165	BV	20	1-11-72	16-165	BV
6	1-11-72	16-165	BV	21	1-11-72	16-165	BV	22	1-11-72	16-165	BV
7	1-11-72	16-165	BV	23	1-11-72	16-165	BV	24	1-11-72	16-165	BV
8	1-11-72	16-165	BV	25	1-11-72	16-165	BV	26	1-11-72	16-165	BV
9	1-11-72	16-165	BV	27	1-11-72	16-165	BV	28	1-11-72	16-165	BV
10	1-11-72	16-165	BV	29	1-11-72	16-165	BV	30	1-11-72	16-165	BV

NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY
1	12-13-71	16-165	BV	11	1-11-72	16-165	BV	12	1-11-72	16-165	BV
2	1-11-72	16-165	BV	13	1-11-72	16-165	BV	14	1-11-72	16-165	BV
3	1-11-72	16-165	BV	15	1-11-72	16-165	BV	16	1-11-72	16-165	BV
4	1-11-72	16-165	BV	17	1-11-72	16-165	BV	18	1-11-72	16-165	BV
5	1-11-72	16-165	BV	19	1-11-72	16-165	BV	20	1-11-72	16-165	BV
6	1-11-72	16-165	BV	21	1-11-72	16-165	BV	22	1-11-72	16-165	BV
7	1-11-72	16-165	BV	23	1-11-72	16-165	BV	24	1-11-72	16-165	BV
8	1-11-72	16-165	BV	25	1-11-72	16-165	BV	26	1-11-72	16-165	BV
9	1-11-72	16-165	BV	27	1-11-72	16-165	BV	28	1-11-72	16-165	BV
10	1-11-72	16-165	BV	29	1-11-72	16-165	BV	30	1-11-72	16-165	BV

NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY
1	12-13-71	16-165	BV	11	1-11-72	16-165	BV	12	1-11-72	16-165	BV
2	1-11-72	16-165	BV	13	1-11-72	16-165	BV	14	1-11-72	16-165	BV
3	1-11-72	16-165	BV	15	1-11-72	16-165	BV	16	1-11-72	16-165	BV
4	1-11-72	16-165	BV	17	1-11-72	16-165	BV	18	1-11-72	16-165	BV
5	1-11-72	16-165	BV	19	1-11-72	16-165	BV	20	1-11-72	16-165	BV
6	1-11-72	16-165	BV	21	1-11-72	16-165	BV	22	1-11-72	16-165	BV
7	1-11-72	16-165	BV	23	1-11-72	16-165	BV	24	1-11-72	16-165	BV
8	1-11-72	16-165	BV	25	1-11-72	16-165	BV	26	1-11-72	16-165	BV
9	1-11-72	16-165	BV	27	1-11-72	16-165	BV	28	1-11-72	16-165	BV
10	1-11-72	16-165	BV	29	1-11-72	16-165	BV	30	1-11-72	16-165	BV

NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY	NO.	DATE	BULL. NO.	BY
1	12-13-71	16-165	BV	11	1-11-72	16-165	BV	12	1-11-72	16-165	BV
2	1-11-72	16-165	BV	13	1-11-72	16-165	BV	14	1-11-72	16-165	BV
3	1-11-72	16-165	BV	15	1-11-72	16-165	BV	16	1-11-72	16-165	BV
4	1-11-72	16-165	BV	17	1-11-72	16-165	BV	18	1-11-72	16-165	BV
5	1-11-72	16-165	BV	19	1-11-72	16-165	BV	20	1-11-72	16-165	BV
6	1-11-72	16-165	BV	21	1-11-72	16-165	BV	22	1-11-72	16-165	BV
7	1-11-72	16-165	BV	23	1-11-72	16-165	BV	24	1-11-72	16-165	BV
8	1-11-72	16-165	BV	25	1-11-72	16-165	BV	26	1-11-72	16-165	BV
9	1-11-72	16-165	BV	27	1-11-72	16-165	BV	28	1-11-72	16-165	BV
10	1-11-72	16-165	BV	29	1-11-72	16-165	BV	30	1-11-72	16-165	BV

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTN & SONS
RICHARD ROTN, ARCHITECT

JACOB, BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH A. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY
PAVING, UTILITIES, FOUNDATIONS

WATER & F.S.P. RISER DIAGRAM

DRAWN: NONE
SCALE: NONE
CHECKED: EAS.
DATE: 5-15-68
REVIEW: OF
PROJECT NUMBER: 30-2
DRAWING NUMBER: P-X-23

STRAINER

* MODIFIED WITH BOSS FOR 3" IPS. THREADED CONNECTION TO RECEIVE 3" IPS. CLOSE NIPLLE & 3/4" DIA FUNNEL 7/8" HIGH WITH RECESSED DOME STRAINER
* DURA-COATED CAST IRON FUNNEL TOP LESS BUCKET & LESS GRATE WITH RECESSED DOME STRAINER TOP MODIFIED TO RECEIVE (3'-0") THREE FOOT
3" DIA. CAULKED INTO TOP OF DRAIN (STANDPIPE) BY PLUMBING CONTRACTOR.
* PROVIDE WITH 5" DIA. GRATE

WERE USED

* ROCKWELL-WOODSTROM VALVE CO. FIGURE
 ** WILLIAMS & HAGER CO. FIGURE NO.
 *** ELKHART CO. (REQ'D AT FIRE HOSE STATION)
 +++ WALKWORTH VALVE CO.


CODE: TO ZURN FIXTURE SUPPORTS - LETTERS AND NUMBERS:

SUFFIX LETTERS: S - SYPHON - JET SYSTEM, B - BLOW OUT SYSTEM, N - HUB & SPIGOT FITTINGS, T - THREADED FITTINGS, R - RIGHT HAND HORIZONTAL FITTING OR RIGHT HAND HUB INLET - FITTING, L - LEFT HAND HORIZONTAL FITTING OR LEFT HAND HUB INLET FITTING, AND D - DOUBLE HORIZONTAL OR VERTICAL FITTING.

[illegible]

NOTES: URINALS (P-2)

SERVICE SINK (P-6)
SUPPORT ON 2-2-1229 CHAIR CARRIER WITH HANGER
PLATE, VITREOUS ENAMEL BRACKETS & BLOCK TYPE
FEET.

		
APPROVED _____ _____ CHIEF, PLANNING DIVISION DATE _____		

MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY

PROJECT NUMBER		SHEET	OF
----------------	--	-------	----

P-X-26

○ 〇 〇 〇

WATER HAMMER ARRESTORS ALTERNATE TO AIR CHAMBERS			
BRANCH SIZE	SHOCKTROL NO.	MAX. PRESSURE	MAX. LENGTH OF BRANCH RUN
3/4"	100	90	25'
1"	100	90	25'
1 1/2"	300	90	25'
2"	400	90	25'
2 1/2"	400	90	25'

NOTE:
LOCATE ARRESTORS AT TOP OF THE BRANCH
PROP TO FIXTURES AS INDICATED ON
4" SCALE DETAILS.

2 1/2" C.W. TO W.C. FLUSH VALVE 1' ABOVE FIXTURE

GENERAL NOTES:

- 1-FOR PLUMBING & SPRINKLER DNG'S NO'S. & TITLES SEE ARCH. DRAWINGS
- 2-WHERE PLANK BATTEN, PENETRATIONS ARE REQUIRED, DUE TO PIPING, PROVIDE 18" GAUGE STEEL SHEET, FULL SIZE OF GYPSUM WALL CLOSURE SHEET, AS INDICATED ON ARCH. DNG.
- 3-PIPING SHOWN DOUBLE LINE IS TENTATIVE & CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE SAME.
- 4-PIPING INDICATED AS BEING IN THE EXISTING TUBE REMOVAL AREA (SHADER AREA ON DWGS), SHALL NOT BE INSTALLED UNTIL TUBES ARE REMOVED & SLAB IS POURED.

* WEL PUMP Co. ** BELL & GOSSETT Co.
M.W. HEATER (1 REQ'D - LOCATED IN JANITOR'S CLOSET NORTH AREA PLATFORM 'C' EL. 280'-0")
 PROVIDE (1) TWO (2) KW TOTAL OF EACH ELECTRIC WATER HTR. - COPPER SILICON BRGS V. 3 DIAM. 500Y. A.C. AS
 AVAILABLE - 1" PLASTIC PIPING - 1" PUMPS - (1) FIVE FOOT MIN. OF EQUAL
 ** WELPAC CO. PROVIDE ONE SUMP PUMP IN EACH LEVEL, FR WHERE INDICATED IN PUMPING BWS.

* CONTRACTORS OPTION TO USE EITHER
C.I. OR STEEL PIPING SYSTEM.
** CONTRACTOR'S OPTION
*** CEMENT LINED DUCTILE IRON SEWER PIPE

APPROVED	CHIEF, PLANNING DIVISION
	DATE

THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES EMERY ROTH & SONS

MIRORU YAMAGAKI, ARCHITECT RICHARD NOTH, ARCHITECT

WORTHINGTON, SWILLING, HELL & JACKSON **JAROS, BAUM & BOLLES**
STRUCTURAL ENGINEERS **MECHANICAL ENGINEERS**

JOSEPH R. LORING & ASSOCIATES **THE PORT OF NEW YORK AUTHORITY**
CIVIL AND ELECTRICAL ENGINEERS **PAVING UTILITIES FOUNDATIONS**

[illegible]

NO-2

BRANCH	P. J. T.	CHECKED	FAS
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SCALE	NONE	DATE	5-15-08
-------	------	------	---------

NUMBER	DATE	OF

P-X-27

MATCH LINE N. 4735.00

N. 4700.00

N. 4600.00

N. 4500.00

N. 4400.00

N. 4300.00

NOTE

1. ALL PIPES IN TRACK AREA SHALL BE EXTRA STRENGTH POROUS CONCRETE PIPE.
2. ALL MAINS 10" & 12" SHALL PITCH @ 1/8" / 10'-0".
3. ALL 6" & 8" LATERALS IN THE PLAZA AREA SHALL BE RUN FLAT WITH AN INVERT EL. 239.83 UNLESS OTHERWISE NOTED.
4. ALL 6" LATERALS IN THE TRACK AREA SHALL BE RUN FLAT WITH AN INVERT EL. 242.00 UNLESS OTHERWISE NOTED.
5. BACKFILL FOR ALL 10" OR 12" MAINS SHALL BE TYPE I FILLTEX.
6. FOR TRENCH LOCATIONS SEE DWG R-20 THRU R-74 OF WTC 130.002.

N. 4250.00
W. 9106.50

REV.	DATE	DESCRIPTION
1	1/16/68	CHIEF ENGINEER
2	7/25/69	REVISION

NO.	DATE	BY	DESCRIPTION	CHIEF ENGINEER
1	1/16/68	MINORU YAMASAKI	REVISION	MINORU YAMASAKI
2	7/25/69	MINORU YAMASAKI	REVISION	MINORU YAMASAKI

NO.	DATE	BY	DESCRIPTION	CHIEF ENGINEER
1	1/16/68	MINORU YAMASAKI	REVISION	MINORU YAMASAKI
2	7/25/69	MINORU YAMASAKI	REVISION	MINORU YAMASAKI

NO.	DATE	BY	DESCRIPTION	CHIEF ENGINEER
1	1/16/68	MINORU YAMASAKI	REVISION	MINORU YAMASAKI
2	7/25/69	MINORU YAMASAKI	REVISION	MINORU YAMASAKI

THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY

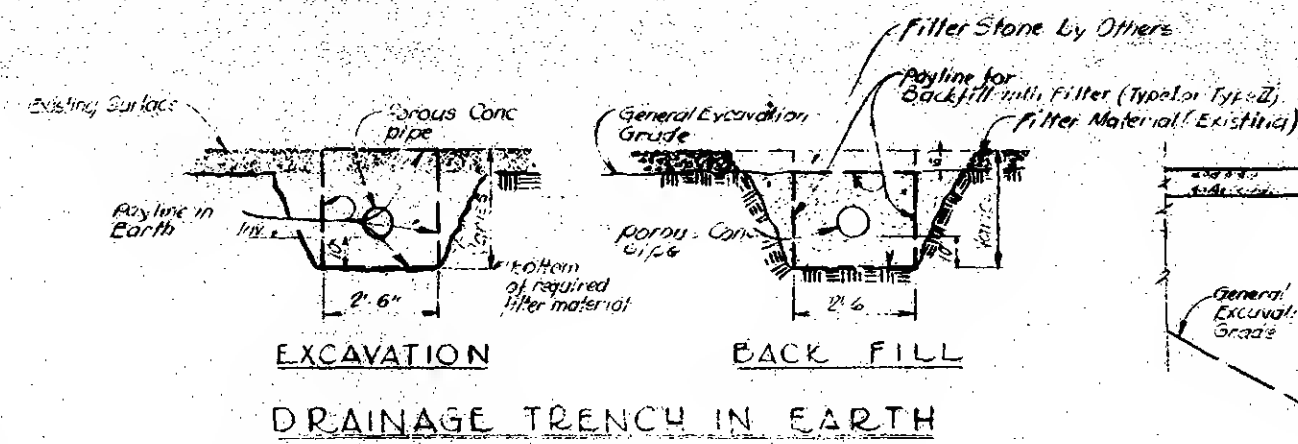
MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT
WORthington, BRILLING, HELLER & JACKSON
STRUCTURAL ENGINEERS
JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT
JAMES BAUM & SONS
MECHANICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY
PAVED STALLS FOUNDATION

SUB GRADE PLAN - ZONE K SUB - DRAINAGE PLAN

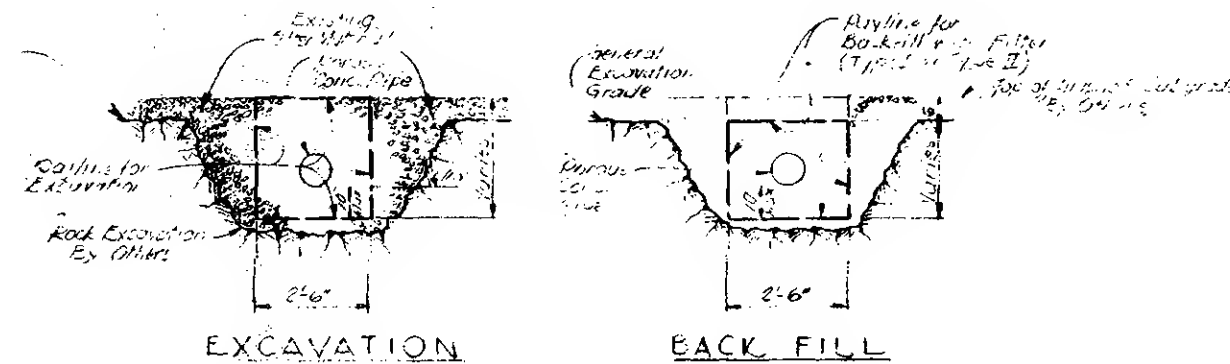
DATE	SCALE	DATE	DATE
1/16/68	1/8" = 1'-0"	May 15 68	

PX-51



EXCAVATION
DRAINAGE TRENCH IN EARTH

BACK FILL

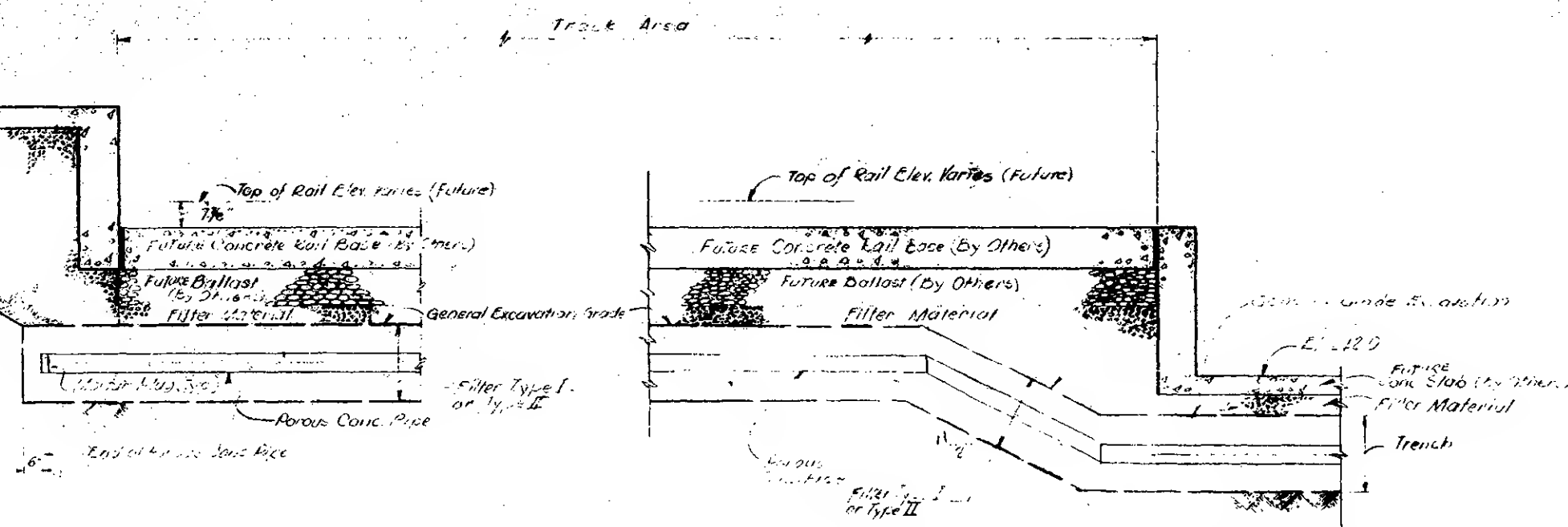


EXCAVATION

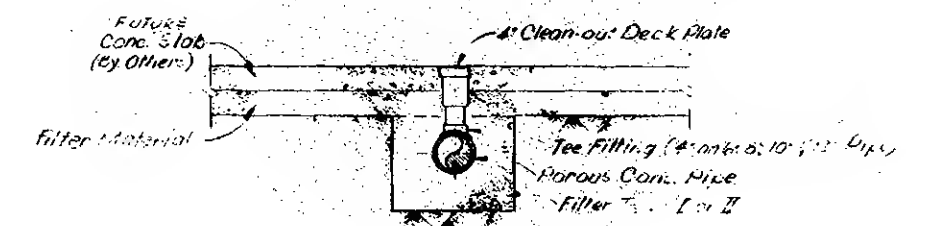
BACK FILL

DRAINAGE TRENCH IN ROCK

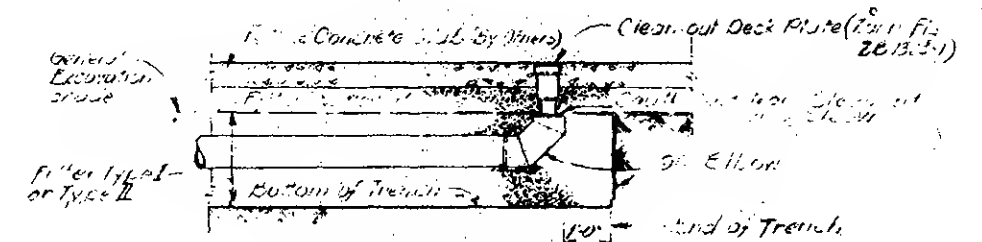
NOTE: FILTER SHALL BE TYPE I OR TYPE II (SEE SPECIFICATIONS) TO BE DETERMINED BY THE ENGINEER IN THE FIELD.



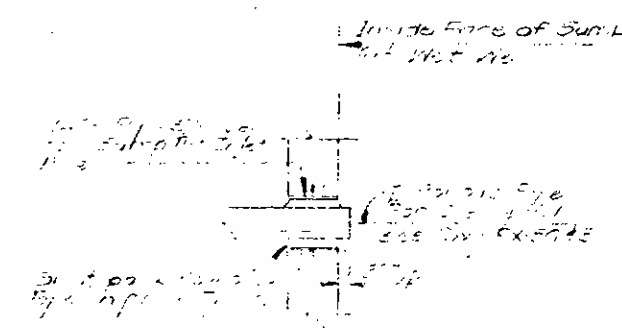
TYPICAL CROSS-SECTION THROUGH TRACK AND PLATFORM AREA



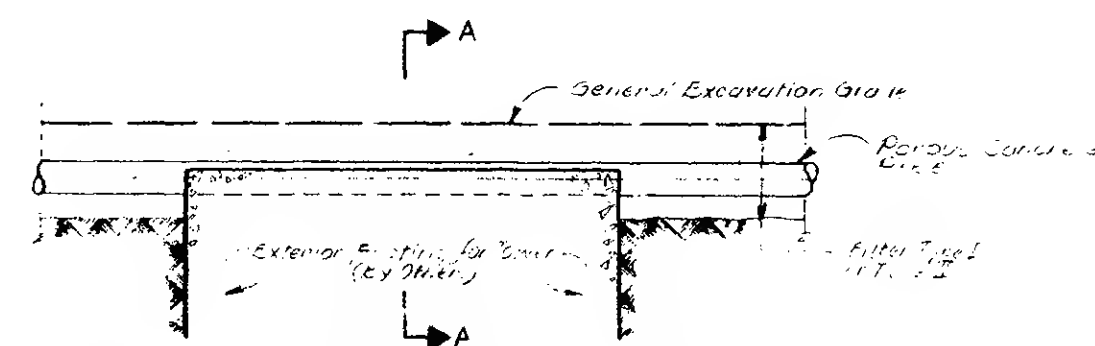
TYPICAL CLEAN-OUT CONNECTION



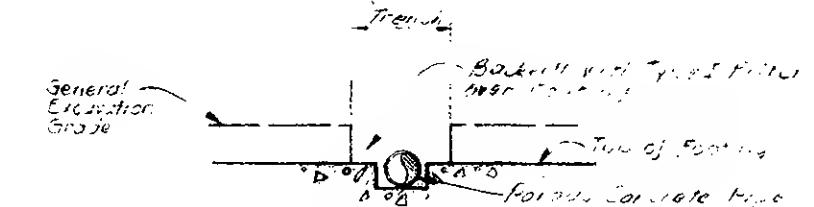
TYPICAL END OF PIPE
CLEAN-OUT CONNECTION



TYPICAL DETAIL FOR 24"
PIPE OVER EXCAVATION



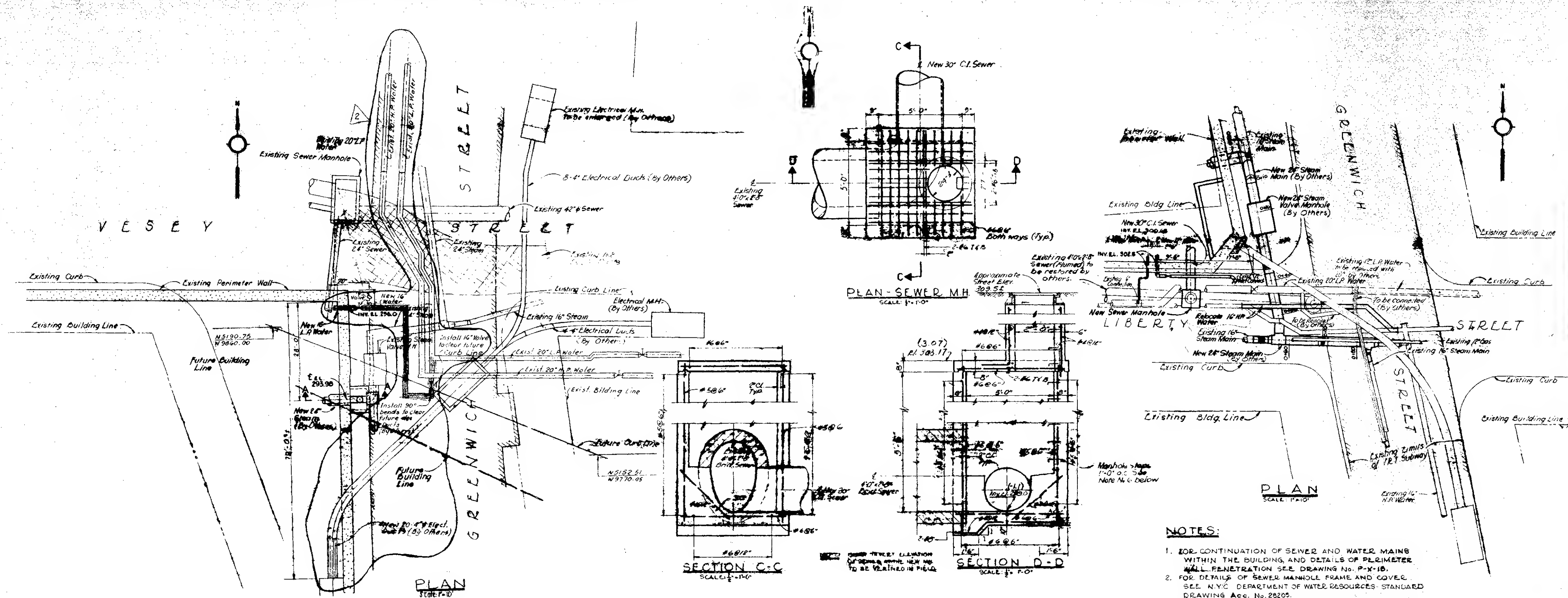
DETAIL OF POROUS CONCRETE PIPE
OVER EXTERIOR TOWER FOOTING



SECTION A-A

NOTE:
1. FOR GENERAL EXCAVATION GRADES, SEE CONTRACT, WTC-130,000, DRAWINGS, NO. K-60 THROUGH K-62.
2. FOR TRENCH LOCATIONS, SEE DWG E-60 THROUGH E-74 OF WTC-130,000.

REV NO. 1 CHIEF ENGINEER R. J. [Signature]		NO. DATE BY DESCRIPTION 1. 7-7-60 [Signature] [Signature] [Signature]		CHIEF, PLANNING DIVISION DATE		THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT WORTHINGTON, SKIDLING, MELLER & JACKSON STRUCTURAL ENGINEERS JOSEPH W. LORING & ASSOCIATES ELECTRICAL ENGINEERS		SUB-GRADE PLAN SUB-DRAINAGE DETAILS DRAWN BY: [Signature] SCALE: 1" = 1'-0" DATE: 7-7-60 PROJECT NUMBER: [Signature] SHEET: 1 OF 1 DRAWING NUMBER: PX-52	
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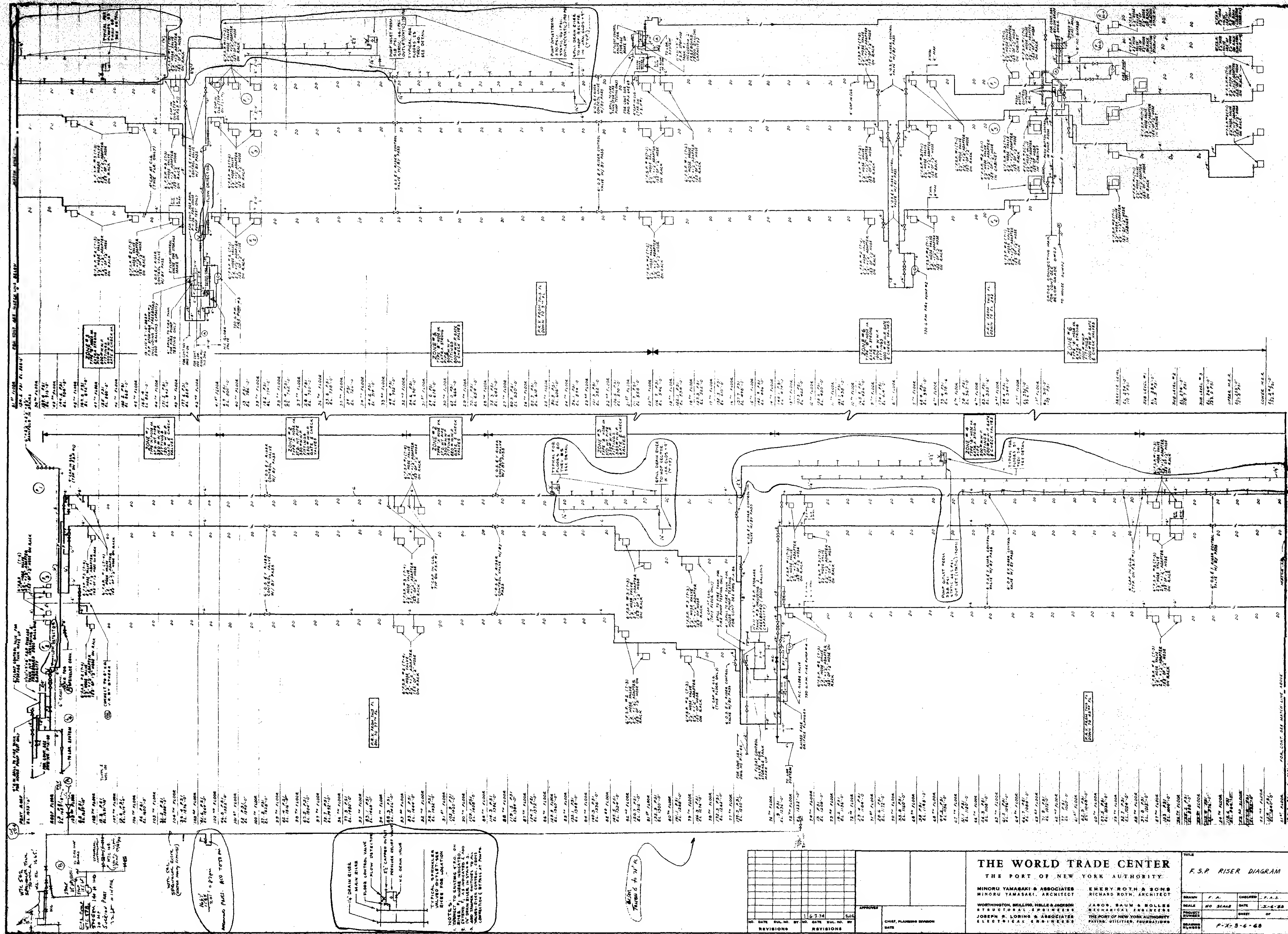
NOTES:

1. FOR CONTINUATION OF SEWER AND WATER MAINS WITHIN THE BUILDING AND DETAILS OF PERIMETER WALL PENETRATION SEE DRAWING NO. P-X-10.
2. FOR DETAILS OF SEWER MANHOLE FRAME AND COVER SEE N.Y.C. DEPARTMENT OF WATER RESOURCES STANDARD DRAWING ACC. NO. 28205.
3. PIPE FOR THE 16" H.P. WATER MAIN RELOCATION IS TO BE SALVAGED FROM EXISTING MAIN.
4. ALL CAST-IN-PLACE CONCRETE IS TO BE CLASS "D".
5. CUT OR DAMAGED EXISTING PAVEMENT SHALL BE PATCHED USING "SHELL-CON-MIX" COLD ASPHALT CONCRETE OR EQUAL; APPLIED AND COMPACTED IN NOT MORE THAN TWO INCH THICK COURSES TO A TOTAL THICKNESS OF NOT LESS THAN SIX INCHES. ALLOW TWENTY-FOUR HOURS BETWEEN COURSES.
6. FOR DETAILS OF WROUGHT IRON MANHOLE STEPS SEE N.Y.C. DEPARTMENT OF WATER RESOURCES STANDARD DRAWING NO. ACC. NO. 28721.
7. ELEVATIONS SHOWN () REFER TO MANHATTAN DATUM WHICH IS 273' ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY.

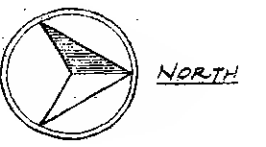
REV NO.	CHIEF ENGINEER
1	MS
2	MS

CHIEF ENGINEER

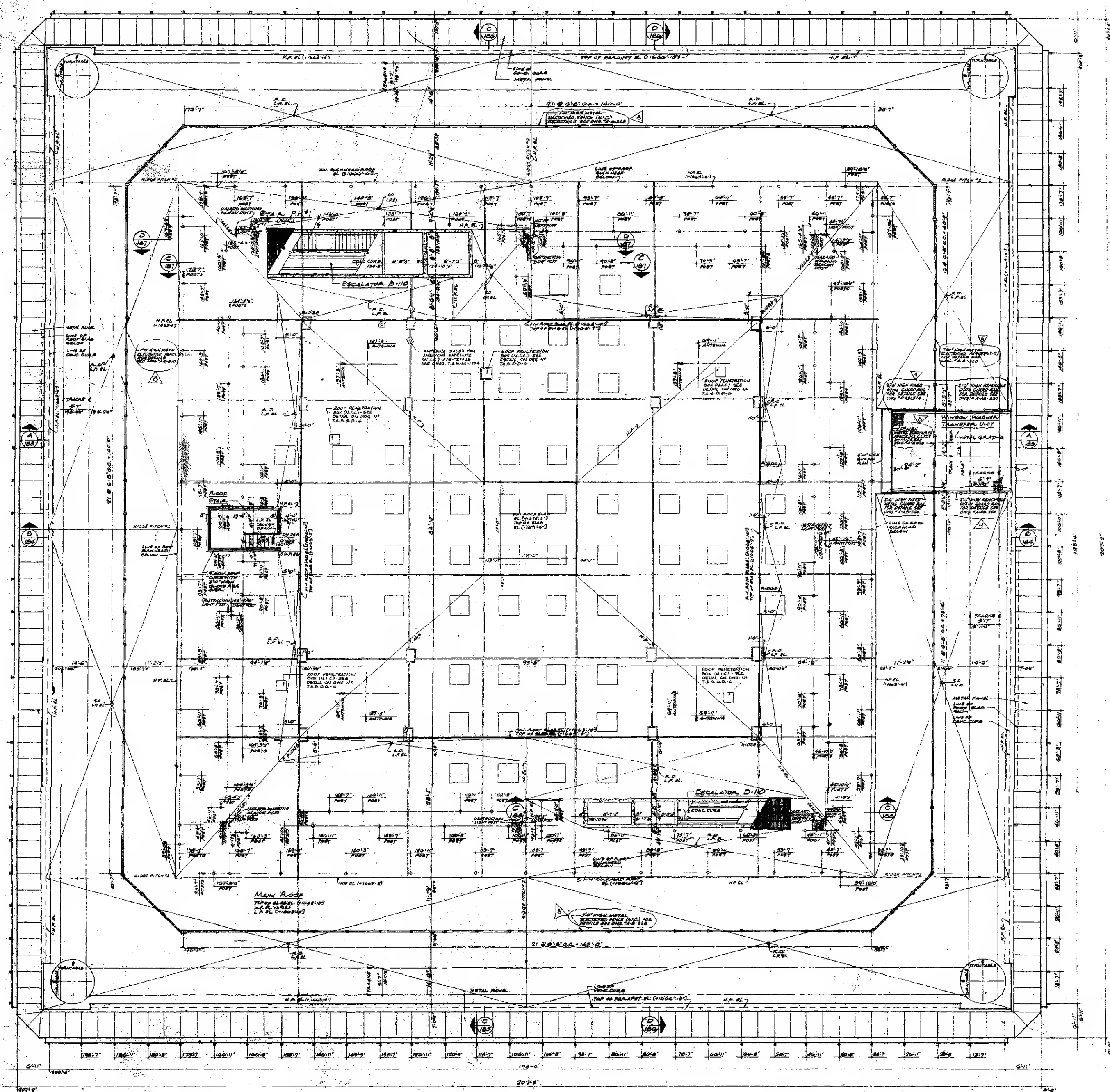
THE WORLD TRADE CENTER THE PORT OF NEW YORK AUTHORITY MINORU YAMASAKI & ASSOCIATES MINORU YAMASAKI, ARCHITECT WORTHINGTON, SKILLING, HILL & JACKSON STRUCTURAL ENGINEERS JOSEPH R. LORING & ASSOCIATES ELECTRICAL ENGINEERS		EMERY ROTH & SONS RICHARD ROTH, ARCHITECT JAMES BAUM & SONS MECHANICAL ENGINEERS THE PORT OF NEW YORK AUTHORITY PAUL STICKLER, SUPERVISOR		OUTSIDE UTILITY CONNECTIONS WATER AND SEWER SCALE: AS SHOWN DATE: MAY 15, 1960 PROJECT NUMBER: WTC-50100 SHEET: OF DRAWING NUMBER: P-X-60
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FILE AT END OF SUB GRADE PLUMBING



- NOTES:
1. FOR GENERAL REFERENCE TO MATERIALS, SYMBOLS, ABBREVIATIONS, PLUMBING SCHEDULES, DRAIN SCHEDULES AND SCHEDULE OF DRAWINGS, SEE DRAWING 100-1 TO 100-10.
 2. ALL ELEVATIONS GIVEN THIS 100-10 ARE IN RELATION TO DATUM OF BUILDING.
 3. ALL ELEVATIONS GIVEN THIS 100-10 ARE IN RELATION TO DATUM OF BUILDING.
 4. FOR MECHANICAL AND ELECTRICAL LAYOUTS SEE APPROPRIATE MECHANICAL AND ELECTRICAL DRAWINGS.
 5. ALL ELEVATIONS GIVEN THIS 100-10 ARE GIVEN IN RELATION TO BUILDING DATUM.



CONTRACT B15 DRAWING 100-10

BULLETINS, NOT DATED ARE IN THE PROCESS OF COMPLETION

NO.	DATE	SUB. NO.	BY	NO.	DATE	SUB. NO.	BY
1	5-30-56	2-256	L.V.	1	5-30-56	2-256	L.V.
2	7-27-56	2-256	D.S.	2	7-27-56	2-256	D.S.
3	8-7-56	2-256	D.S.	3	8-7-56	2-256	D.S.
4	10-23-56	2-256	D.S.	4	10-23-56	2-256	D.S.
5	12-12-56	2-256	D.S.	5	12-12-56	2-256	D.S.
6	1-11-57	2-256	D.S.	6	1-11-57	2-256	D.S.
7	2-7-57	2-256	D.S.	7	2-7-57	2-256	D.S.
8	3-13-57	2-256	D.S.	8	3-13-57	2-256	D.S.

APPROVED: _____

CHIEF, PLANNING DIVISION

THE WORLD TRADE CENTER
THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES
MINORU YAMASAKI, ARCHITECT

EMERY ROTH & SONS
RICHARD ROTH, ARCHITECT

SKILLING, HELL, CHRISTIANSEN, ROBERTSON
STRUCTURAL ENGINEERS

JAROS, BAUM & BOLLES
MECHANICAL ENGINEERS

JOSEPH R. LORING & ASSOCIATES
ELECTRICAL ENGINEERS

THE PORT OF NEW YORK AUTHORITY
PAVING UTILITIES, FOUNDATIONS

100-10-10

INTERMEDIATE
BULKHEAD & ROOF
DRAINAGE PLAN

NO.	DATE	SUB. NO.	BY
1	5-30-56	2-256	L.V.
2	7-27-56	2-256	D.S.
3	8-7-56	2-256	D.S.
4	10-23-56	2-256	D.S.
5	12-12-56	2-256	D.S.
6	1-11-57	2-256	D.S.
7	2-7-57	2-256	D.S.
8	3-13-57	2-256	D.S.

APPROVED: _____

CHIEF, PLANNING DIVISION

TOWER B, Plumbing Bulkhead & Roof